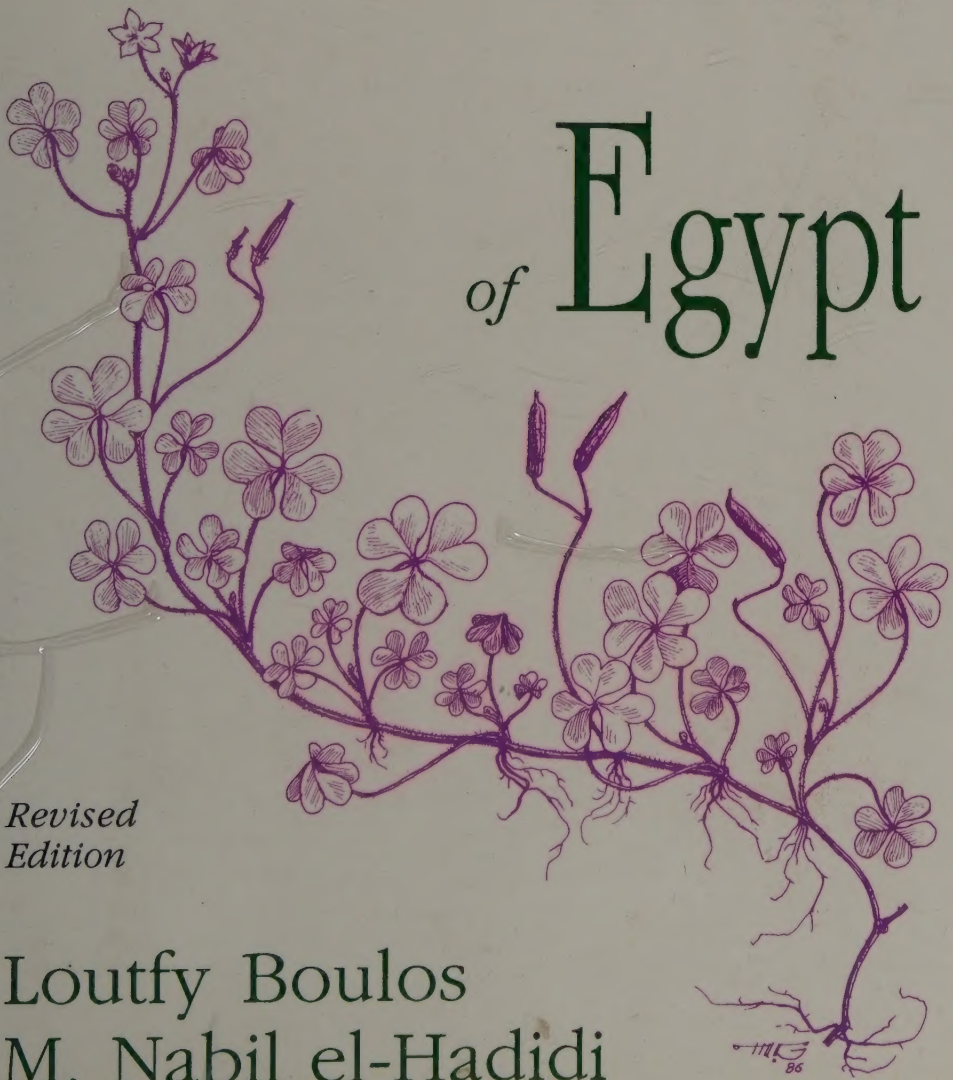
The Weed Flora *of* Egypt



Revised Edition

Loutfy Boulos
M. Nabil el-Hadidi

This revised edition of a standard text has been enhanced by additional introductory material, eight new entries, twenty-eight new illustrations, extended taxonomic documentation for each entry, and an expanded reference list. A general introduction deals with the description and classification of weeds, distinguishes useful and poisonous varieties, and discusses weed research and control. The main part of the book describes in detail 169 species of vascular plants. Each entry gives the scientific name of the plant, with a brief taxonomic history; Arabic and English names where available; a botanical description; and notes on habitat, worldwide distribution, and uses. A full-page line illustration accompanies each entry. There is a complete reference list, and the book is provided with three indexes of scientific, English, and Arabic names.

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Revised Edition

Loutfy Boulos
M. Nabil El-Hadidi

Illustrated by Magdy El-Gohary

The American University in Cairo Press

The plates on pages 27, 41, 103, 107, 119, 131, 137, 139, 179, 195, 299, 317, and 217 originally appeared in *The Weed Flora of Kuwait* by Loutfy Boulos (Kuwait University, 1988) and are reproduced here courtesy of Kuwait University. The plates on pages 215, 243, and 247 originally appeared in *Medicinal Plants of North Africa* by Loutfy Boulos (Reference Publications, Inc., 1983) and are reproduced here courtesy of the author.

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113 Sharia Kasr el Aini
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Dar el Kutub No. 7826/93
ISBN 977 424 323 4

Printed in Egypt at the Printshop of the American University in Cairo

Dedicated with respect and gratitude
to the memory of our teacher,
the late Professor Mrs. Vivi Täckholm
(January 7, 1898–May 3, 1978)

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FOREWORD

Throughout the world increasing attention is being focused on weeds—their economic effects through contamination of crops, and methods of control by physical, chemical, or other means. Weeds are a major hazard to modern agriculture and their control costs billions of dollars and adds considerably to the costs of production.

A first step in any study of weeds is to know what they are and this guide to the weed flora of Egypt will provide an invaluable basis for an appreciation of the wide array of species that occur especially in the gardens, orchards, and irrigated areas of the country. The simple and concise descriptions together with the excellent illustrations of Mr. Magdy El-Gohary will readily facilitate identification of the weed species. The introductory part of the work gives a valuable summary of the nature of weeds, their kinds of habitat, distribution, and means of control.

The authors are to be congratulated on producing this valuable handbook. It will allow further detailed research into the biology and control of weeds to be undertaken and thereby benefit the agricultural productivity and economy of the country.

V. H. HEYWOOD

Professor and Head
Botany Department
University of Reading
27 July 1984

ACKNOWLEDGMENTS

We are both most grateful to Mr. Magdy El-Gohary for his skill and patience in producing the illustrations for this book. Loutfy Boulos extends his thanks to the National Research Center, Dokki, Cairo, for Research Grant no. 1-4-5/80/81, as well as to the directors and staff of the Office of Biological Conservation and Botany Department of the Smithsonian Institution, Washington, D.C., where a part of the text was prepared, courtesy of their kind help and library facilities offered during winter 1983.

Miss Pat Halliday, Royal Botanic Gardens, Kew, U.K., kindly brought to our attention two nomenclatural changes for this revised edition.

INTRODUCTION

This guidebook is a revised second edition of *The Weed Flora of Egypt* published in 1984 and reprinted in 1989. The nomenclature and text have been revised and updated, a number of plates have been redrawn, and seven species with full illustrations have been added. The sequence of families is rearranged, starting with Dicots, followed by Monocots and Ferns.

The weed flora is known to be a changing flora: a species which is 'common', or more appropriately 'widespread' or 'abundant', today may become locally extirpated and 'uncommon' or 'infrequent' in the country as a whole after some years or decades. On the other hand, some species may be locally abundant, with colonies flourishing in a restricted area, and yet quite uncommon elsewhere. Or some fairly widespread native weeds may become very uncommon while newly introduced species may become naturalized and widespread in rather short periods of time. For example, **Ceruana pratensis** (Compositae) used to be a fairly common weed along the Nile banks and major irrigation canals, especially in Upper Egypt, with records dating back to pharaonic times. The plant was used in ancient Egypt for making baskets, mats, brooms, and so forth but is now becoming extremely rare and is probably on the way to extinction in Egypt. In contrast, the newly introduced **Aster squamatus** (Compositae) from Latin America, of which the first records in Egypt date back to the early 1970s, is now a widespread weed throughout the entire arable lands of the country including the newly reclaimed and cultivated regions.

The weed flora of Egypt, the subject of this guidebook, is presented with special emphasis on irrigated fields, orchards, gardens, irrigation canals, and roadsides. Different aspects of weeds are discussed—their habitats, distribution, abundance, as well as their interaction with the crops alongside of which they grow. References are given to introduce the reader to some relevant books, research papers, theses, and regional studies.

What is a Weed?

The most simple and practical definition of a weed is probably: a plant which grows where it is not needed or where another plant is wanted to grow.

If you visit a rural area of the country (for instance, in the Nile Delta, Upper Egypt, or one of the oases of the Western Desert), you will encounter cotton and corn in summer, wheat and clover in winter, and perhaps other crops, depending on the season and the area. Within the fields you will observe that, in addition to the planted crops, there are other plants growing: these are the weeds. You will further notice that fewer weeds grow in fields which have been well looked after than in 'neglected' fields. The 'wild' weeds are aggressive and thus struggle for their existence against the 'domesticated' or 'cultivated' crops, which receive enough care for their protection. In other words, if weeds and cultivated plants were grown under the same conditions and left to compete for space and nutrients, the weeds would dominate. The supervitality of weeds allows them to grow rapidly; cultivated plants would have to give way to their stronger competitors.

Weeds grow in assemblages which are rather characteristic for each crop. Winter weeds abound in cooler months of the year and are usually associated with winter crops. Summer weeds abound in warmer months of the year and are associated mainly with summer crops. Some summer and winter weeds are biologically active throughout the year and are usually associated with perennial crops in orchards or date palm groves.

Weeds are not entirely harmful plants. Some weeds may be used for medicinal purposes, for making good lawns, or as fodder material. **Cynodon dactylon** provides an outstanding example of a weed which is very difficult to control, as it tolerates almost any growth conditions; it is frequently met with in fields, gardens, orchards, along roadsides, and so forth. Yet this grass makes excellent lawns and good fodder, and has medicinal properties as well.

Classification of Weeds

Weeds are generally classified according to their growth habit, as annuals, biennials, or perennials, or according to their association with the habitats they frequently occupy, such as fields, orchards, gardens, lawns, roadsides, waste places, ditches, canal banks, and so forth.

Annual weeds

Annual weeds germinate, grow, produce flowers and seeds, and die within one season or a maximum of one year. Most weeds in Egypt are

annuals, usually summer or winter annuals, since very few survive for a whole year.

Biennial weeds

Biennial weeds live more than one year and up to two years. They possess underground parts which survive when the aboveground vegetative growth dies.

Annuals sometimes behave like biennials when their lower aerial (aboveground) parts survive to resume new growth during the next year. These are termed 'perennants'. Very few weeds in Egypt are true biennials; indeed what we have are perennants, for example, **Euphorbia granulata** and **Sonchus macrocarpus**.

Perennial weeds

Perennial weeds live more than two years. In Egypt they are mostly herbaceous, either with a woody base or with tuberous underground parts. A few are shrubs (for example, **Pluchea dioscoridis**) or even grow into small-sized trees (for example, **Sesbania sesban**). The aerial parts of a perennial weed produce seeds and die before the end of one year, that is, during one growing season, while the underground or basal parts survive till the next season to provide new vegetative growth, and so the cycle is repeated. Perennial weeds reproduce by seed and also vegetatively from old stocks left over from previous seasons.

Several types of perennial weeds are known:

Taproot perennials (such as **Sida alba** and **Sesbania sesban**) reproduce only by seed.

Creeping perennials. The principal means of reproduction of creeping perennials is usually vegetative. They reproduce either from creeping rhizomes, which are underground stems, as in **Cynodon dactylon** and **Cyperus laevigatus**, or from horizontal roots, as in **Convolvulus arvensis**.

Tuberous perennials. Some perennial weeds reproduce by small, tuberous structures formed at the ends of their underground stems or roots; these are the tubers. Tubers are storage organs capable of producing new vegetative overground plants whenever needed by the plant. Tubers usually remain in the ground when the green parts of the plant are pulled out. Examples of tuberous perennial weeds are **Cyperus rotundus** and **Scirpus tuberosus**.

Perennials with fibrous roots. Perennial weeds which possess thick tufts of fibrous roots are usually members of the grass family (Gra-

mineae), for example, **Polypogon viridis** and **Dichanthium annulatum**. However, some other perennials, like **Plantago major**, may possess short tap roots and a mass of fibrous roots.

Bulbous perennials are usually members of the family Liliaceae (often segregated into smaller families among which is Alliaceae). Besides reproduction by seeds, some wild onions belonging to the genus **Allium** reproduce vegetatively by minute bulbs called bulbils. These bulbils are packed around the main larger bulb, become detached in the ground, and grow into mature plants.

In Egypt, bulbous weeds are rarely encountered in the irrigated lands of the Nile Valley and Delta. However, on the newly reclaimed desert areas adjacent to the coastal Mediterranean region, some species such as **Allium roseum** (Alliaceae) and **Muscari comosum** (Liliaceae) are rather frequent in the barley fields and in orchards with olive, fig, and almond trees grown under dry farming. These and other bulbous weeds bloom in spring after the winter rains, then set fruit and dry out during the hot, dry summer. Their bulbs and bulbils remain in the soil and wait for the next winter rains before commencing growth.

Perennials with corms. Like the bulbous weeds, perennial weeds with corms—like **Arisarum vulgare** and **Eminium spiculatum** (Araceae), **Gynandriris sisyrinchium** and **Gladiolus italicus** (Iridaceae)—are confined to the coastal Mediterranean region in Egypt. These weeds perennate by corms almost in the same way as the bulbous weeds.

Losses from Weeds

Losses from weeds constitute a major problem to the farmer and to the economy of many agricultural communities. In an example from a semiarid region, Parker (1972) points out that the economic losses from weeds in Arizona are of continuing concern to farmers. Weeds decrease farm income by robbing the soil of precious moisture that would otherwise be available for crop production, by utilizing soil nutrients needed by cultivated plants, by lowering the quality of farm products because of weed impurities, and by increasing the cost of labor, equipment, and irrigation. Parker adds that many weeds also harbor some of the worst crop insect pests and are alternate hosts to organisms causing crop diseases.

Frankton and Mulligan (1970) write: "In the United States, farmers' annual losses from weeds have been estimated at about 5 billion dollars. Based on the relative acreage under crop in the United States and Canada, and assuming that the ratio of loss is similar, the Canadian loss could be

over 500 million dollars. There seems to be general agreement that the losses caused by weeds are greater than the combined losses produced by animal diseases, plant diseases, and insect pests."

Some weeds are parasites on useful plants, especially field crops. In Egypt, great losses in crop yields are due to **Cuscuta,** which is a parasite on berseem (Egyptian clover), **Orobanche**, a parasite on tomato, potato, and broad bean plants, and **Striga**, a parasite on sugar cane.

Poisonous Weeds

Among the weeds known to grow in Egypt, some are poisonous to livestock and should be prevented from contaminating forage plants. Some of these weeds are uncommon and of rather restricted distribution, for example, **Cardiospermum halicacabum** in Upper Egypt and **Raphanus raphanistrum** in Lower Egypt. Others are widespread, such as **Silybum marianum, Lolium temulentum, Lotus arabicus, Lotus corniculatus, Ricinus communis, Datura stramonium, Datura innoxia, Anagallis arvensis**, and **Oxalis corniculata**.

The degree of toxicity of these weeds varies from one species to another, and they are poisonous due to the presence of different chemical constituents in their tissues. According to Gardner and Bennetts (1956), **Silybum marianum** has been responsible for mortalities in cattle and sheep; the plant is poisonous because of its high nitrate content. **Lotus arabicus** and **Lotus corniculatus** are among the most widely distributed weeds in Egypt and have been recorded as poisonous weeds (Gardner and Bennetts 1956; Boulos and El-Hadidi 1967; Täckholm 1974). **Lotus** species in general are known to be cyanogenetic, that is, producers of hydrocyanic acid, which is poisonous to grazing animals (Gardner and Bennetts 1956). Some weeds are poisonous due to their alkaloid content, for example, **Anagallis arvensis, Datura stramonium, Euphorbia** spp., **Lolium temulentum, Rumex dentatus**, and **Withania somnifera** (cf. Hilal and Youngken, Jr. 1983).

Useful Weeds

Weeds are not entirely harmful plants. Some are widely used in folk medicine and have proved to be effective against many diseases (cf. Boulos 1983). Others are edible and some are used for fodder, in making lawns, as fuel, or in making mats, furniture, building materials, and many household items. Some examples: **Desmostachya bipinnata** is used in making mats and ropes and in building huts; **Juncus acutus** and **Juncus rigidus** in making mats; **Typha domingensis** in making chairs; **Phrag-**

mites australis in making baskets and in building huts and shelters in fields; **Cyperus alopecuroides** in making mats and chairs; and **Cyperus articulatus** and **Pluchea dioscoridis** in perfuming hair ribbons of women in the rural regions of Egypt.

Weed Control

The concept of weed control should be emphasized as the basis of preventing weeds from colonizing an area—whether it is a garden, field, or nursery—a process which should be performed with minimum effort and expense.

Most of us know about weed killers or herbicides, but the most effective should be selected. This problem is not easy to solve, as some herbicides kill one weed and leave another, and usually a farmer deals with a mixture of weeds in his field.

Annual weeds produce seeds in great numbers, and some perennials multiply vegetatively by rhizomes, bulbs, tubers, or other means, in order to support their struggle for space against domesticated plants. If we succeed in destroying the vegetative parts of a perennial weed (whether by chemical, biological, or mechanical means) without affecting its underground parts, the rhizomes (or any other subterranean structure) will give rise to new vegetative parts after some time. The result is that the weed control is not fully effective.

On the other hand, annual weeds which reproduce only by seeds leave us with the problem of the long viability of their seeds. Seeds of some species can stay buried in the soil for over thirty years and remain able to germinate. This means that successful control will not become effective unless repeatedly done in order to kill young plants before they set fruits and produce new masses of seeds.

These facts about the different habits of weeds and their diverse ways of reproduction lead to the conclusion that we should be aware of the habit and mode of reproduction of weeds before we plan to control them.

One more simple but important factor in successful weed control is the correct naming or identification of weeds. Knowing the correct name of a weed will help one to learn how others have controlled it. This can be a good start toward its successful control.

Research on Weed Control in Egypt

It is beyond the purpose of this guidebook to give a comprehensive account of all aspects of research on the control of weeds in Egypt. However, a few examples on the subject may be presented.

A series of four papers, summarizing an extensive study on the effect of growth regulators and herbicides on purple nutsedge, **Cyperus rotundus**, was given by Rehm and El-Masry (1976, 1977), El-Masry and Rehm (1976, 1977).

The effect of soil application of Gesaprim-80 in powder form mixed with nitrogen fertilizers on weed control and yield of maize was the subject of study presented by Ashour, El-Masry, El-Bastawesy, and Nour (1984).

The nutritional status of some crops (e.g., cotton) as affected by the competition of purple nutsedge was discussed by Ibrahim, Naguib, and El-Masry (1985).

The host–parasite relationship between **Vicia faba** and **Orobanche crenata** was studied by Naguib, El-Baz, and El-Masry (1985). A further comparative study on the chemical constituents of unparasitized seedling roots of the host and the root parasite **Orobanche crenata** was given by Hassan and El-Bastawesy (1988).

El-Deek, Shaban, El-Masry, and Metwely (1990) studied the effect of some herbicides and additional hoeing in maize. This study comprises two papers, the first of which deals with weed control efficiency and the second with crop yield and its components.

Many detailed studies were carried out on different aspects of weed control in Egypt and presented as M.S. or Ph.D. theses, of which the following may be mentioned: Weed control in rice fields (El-Desouky 1985); Effect of some growth regulators and herbicides on growth behavior of purple nutsedge, **Cyperus rotundus** (Saad El-Din 1985); Sensitivity of onion plants (**Allium cepa**) to mechanical and chemical weed control (Hussein 1986); Biological studies on soybean pods during ripening and storage with reference to chemical weed control (Gaweesh 1987); Studies on the herbistatic effects of glyphosate as affected by some inorganic and organic additives on the growth and propagative capacity of purple nutsedge, **Cyperus rotundus** (Messiha 1989); Effect of some herbicides on maize (Metwely 1990); Effect of some herbicides on growth, yield, and quality of broad bean, **Vicia faba** (Ahmed 1990).

Research on the Weed Flora of Egypt

The earliest modern attempt to study the weeds of Egypt was made by Simpson (1932), who studied the weed flora of irrigation channels. Tadros and Atta (1958) gave an account of the plant communities of barley fields and uncultivated desert areas of the western Mediterranean

coastal region. Boulos (1966) studied the flora of the Nile region in Egyptian Nubia and presented a documentary record of the weeds growing in the area south of Aswan, now inundated by Lake Nasser. Boulos (1967) gave a short account of the weed flora of Aswan. Boulos and El-Hadidi (1967) produced a guide (illustrated by M. El-Gohary) to the common weeds of Egypt: 150 species were treated with notes on their habit, habitat, and vernacular Arabic names. El-Hadidi and Ghabour (1968) made a floristic study of the Nile Valley region at Aswan, with a special reference to its weed flora. Saarisalo (1968) gave a short account of the weedy vegetation of flower beds and irrigated cultivations in Cairo and some adjacent areas. El-Hadidi, Kosinová, and Chrtek (1970) studied the weed flora of southern Sinai.

A series of papers entitled *Studies on the Weed Flora of Cultivated Land in Egypt* was initiated by El-Hadidi and Kosinová (1971). They presented in the first paper, which comprises a general survey of the different weed populations in Egypt, an introduction to the more detailed and specialized research involved in the floristics and ecology of weeds in Egypt. Analyzing many distribution records of weeds from different parts of Egypt, they were able to point out which are the most common winter and summer weeds with reference to their origin (e.g., Mediterranean, tropical, or temperate).

In the second paper, Imam and Kosinová (1972) presented the result of their studies on the weeds of rice fields. They listed fifty species of vascular plants that were recorded from rice fields throughout Egypt, with notes on their habit and distribution. They concluded that fourteen of these fifty weeds were found to be abundant in rice fields, eleven of them being 'specific' or confined to the rice crop only. The remaining three 'nonspecific' species are present in rice as well as in various other summer crops. Six other species were found to be less frequent, though specific to rice fields. Thirty species are rare or very rare in rice fields. It was also observed that annuals and perennials are almost equal in number but not in abundance. Perennials are mostly rare or accidental weeds (some recorded only once), but a few are specific and abundant in rice fields.

In the third paper of this series, Kosinová (1974) studied the distributional types of one hundred species of weeds which she called "synanthropophytes," that is, plants which frequently occur in artificial habitats. According to Kosinová (1974), these habitats are cultivated ground, fields, gardens, old Arabic gardens, palm groves, orchards, lawns, roads, roadsides, canal banks, canals, channels, ditches, and drains. She distinguished three distributional groups:

1. *Omniterritorial type*: Numerous species are predominantly winter weeds of almost equal occurrence within all regions in Egypt where land is under cultivation.

2. *Riverain type.* With two distinct subtypes:

a. The omniriverain subtype is represented predominantly by weeds of summer crops on alluvial sediments of the Nile.

b. The Delta subtype is demonstrated by the group of weeds restricted to the northern part of the territory, which comprises the Nile Delta, the Cairo area, and newly cultivated land west and east of the Delta.

3. *Extrariverain type.* Includes two subtypes:

a. The coastal or Mediterranean subtype comprises species spread only along the Mediterranean Sea coast,

b. The desert subtype is represented by the weeds in the oases of the Western Desert and elsewhere on the cultivated ground outside the Nile basin.

The fourth paper (Kosinová 1974) deals with the Mediterranean and tropical elements of the weed flora of Egypt. The author recognizes four hundred species of synanthropic plants or synanthropophytes (weeds), which constitute about 20 percent of the entire flora of Egypt. Families which have the highest number of weeds are Gramineae (20 percent), Compositae (11 percent), and Leguminosae (10 percent). Kosinová (1974) also gives a historical review of weeds in Egypt with an interesting list of weeds recorded from the Neolithic to the Coptic periods, including those recorded during the predynastic and dynastic eras of pharaonic Egypt. The distribution patterns of both Mediterranean and tropical weeds are given on two separate maps. Moreover, five species of weeds were selected and mapped to show their distributional pattern in Egypt.

A special study by Kosinová (1975) is devoted to the weed communities of winter crops in Egypt (not included in the above-mentioned series of papers), where three different weed associations were defined on the basis of their floristic, ecological, and phytogeographical characteristics and relationships. The first association was already defined by Tadros and Atta (1958). It characterizes the nonirrigated winter crop vegetation in the Mediterranean region, where **Achillea santolina** is the most dominant species. A newly described plant association receives a new Latin name based on the Latin name of the dominant species in its association. Therefore, the above plant association was named by Tadros and Atta (1958) as *Achilleetum santolinae mareoticum*. The name *mareoticum* was added because another rather similar association had already been described by

Zohary (1950) as *Achilleion santolinae*. The Latin adjective *mareoticum* was added by Tadros and Atta (1958) in reference to the newly described 'variety' of the weedy plant community association, which is confined to Mareotis, the historical name of the Mediterranean coastal region of Egypt.

According to Kosinová (1975), the irrigated winter crop vegetation belongs to the *Melilotion indici* alliance—an alliance being vegetation units that recur in similar forms in many areas—with **Melilotus indicus** as the dominant species. Within this alliance, she recognizes two different associations:

1. *Convolvulo (arvensis)—Rumicetum dentati* occurs in the Nile basin territory, which includes the Nile Delta, Nile Valley, and Fayoum. It is characterized by two constantly dominant species: **Convolvulus arvensis** and **Rumex dentatus**. Other species characteristic of the association are **Cichorium pumilum, Spergularia marina, Chenopodium album, Euphorbia peplus**, and **Vicia sativa**.

2. *Astragalo (corrugati)—Plantaginetum lagopi* occurs in the cultivated lands of the Kharga and Dakhla oases. This association is characterized by two constantly dominant species: **Astragalus corrugatus** and **Plantago lagopus**. Meanwhile **Thesium humile** and **Asphodelus fistulosus** are co-dominant species. Kosinová (1975) adds that the latter two species are almost absent in the Nile region. Therefore, their presence in the Dakhla–Kharga association constitutes one of the major differences between the two associations.

Another special study by Hejny and Kosinová (1977) is restricted to the synanthropic vegetation of Cairo. In this study, they describe the main types of habitats and plant communities of weeds in irrigated lawns, gardens, streets, parks, flowerbeds, waste land, and so forth. The weed communities are described in some detail and the most characteristic species and their abundance are given. Also, the authors often include precise information on the earliest records of contemporary introductions of some weeds.

Another series of papers dealing with the weed communities in the Nile Delta was presented by Shaltout and his collaborators from 1988 through 1993. In the first paper, Shaltout and Sharaf El-Din (1988) describe the different habitat types and plant communities along a transect in the Nile Delta along the Cairo–Alexandria agricultural motorway. They identify the following four groups, each of which comprises different community types:

1. Herbaceous, grassy communities with five community types: **Phragmites australis, Cynodon dactylon, Imperata cylindrica, Desmostachya bipinnata**, and **Dichanthium annulatum.**

2. Herbaceous, nongrassy communities with two community types: **Typha domingensis** and **Juncus acutus.**

3. Shrubby communities with three community types: **Tamarix nilotica, Alhagi graecorum**, and **Pluchea dioscoridis.**

4. Hydrophytic communities with three community types: **Lemna gibba, Eichhornia crassipes**, and **Potamogeton crispus–Ceratophyllum demersum.**

For each community type, other associated species are given with notes on their abundance and soil type.

In the second paper, Shaltout and El-Sheikh (1991) select fifteen widespread weeds mainly distributed along the canals and drains in the central Nile Delta region and evaluate their behavior in relation to environmental gradients of soil variables such as salinity, $CaCO_3$, nitrogen, and organic matter. They indicate that the relationship between salinity and species distribution is positive for some, such as **Phragmites australis** and **Cynodon dactylon**, and negative for others, such as **Polygonum salicifolium** and **Ethulia conyzoides.**

In the third paper, Shaltout, Sharaf El-Din, and El-Fahar (1992) study the weed communities associated with vegetable crops in the Nile Delta in relation to some soil variables. They distinguish three communities approaching the level of alliance: 1) **Beta vulgaris** subsp. **maritima–Rumex dentatus** represents the weed association of winter crops; 2) **Echinochloa colona–Dinebra retroflexa** characterizes the summer crops with the exception of rice; and 3) **Echinochloa crusgalli–Cyperus difformis** represents the rice fields. They add that salinity seems to be the most effective soil variable at the community level.

In the fourth paper, Shaltout and El-Sheikh (1993) analyze the vegetation of canals and drains in the Nile Delta in relation to environmental factors. They distinguish seven vegetation types arranged according to moisture preference as follows: **Imperata cylindrica–Desmostachya bipinnata, Phragmites australis, Panicum repens–Cynodon dactylon, Echinochloa stagninum–Polygonum salicifolium, Echinochloa stagninum, Eichhornia crassipes**, and **Ceratophyllum demersum–Potamogeton crispus.** The species diversity of these vegetation types is discussed in view of the disturbance and heterogeneity hypotheses.

In the fifth paper, Shaltout, Sharaf El-Din, and El-Sheikh (1993) present a study evaluating the species richness and the effect of environmen-

tal factors on the composition of canal and drain vegetation in the Nile Delta. They discuss the unstable conditions along the water bodies such as erosion, cleaning practices, repeatable change in the water level, and excessive human disturbance which may inhibit the establishment of plants from seed while favoring colonization by creeping growth. The authors conclude that the number of species with vegetative and fruiting plants is relatively higher than those with dormant plants in the canal vegetation if compared with that of the drains. They add that the number of species with vegetative, flowering, and fruiting plants increases with the decrease of canal drain width.

Numerous detailed regional studies which deal either entirely or partly with the weed flora and weed assemblages of different regions in Egypt were prepared during the last two decades. These were written as M.S. or Ph.D. theses, mostly unpublished, of which the following may be mentioned: Abd El-Ghany (1981) on Bahariya Oasis; El-Amry (1981) on Minya province; Springuel (1981) on the Islands of the First Cataract at Aswan; El-Bakry (1982) on the Cairo–Ismailia region; El Shayeb (1984) on the reproductive capacity of major weeds in Manufiya Governorate; Mahgoub (1985) on farmlands of the Isthmic region east of the Nile Delta; Abd El-Ghany (1985) a comparative study on the vegetation of Bahariya and Farafra oases and the Fayoum region; Shaheen (1987) on the Aswan area; Mashaly (1987) on the Daqahliya–Dumyat region; Gibali (1988) on northern Sinai; Soliman (1989) on South Tahrir, west of the Nile Delta; El Shayeb (1989) on the weed flora of the Nile Delta; El-Sheikh (1989) on the middle Delta; Al-Sodany (1992) on the northern Nile Delta; Mahgoub (1993) on the weed assemblages of Alexandria and Beheira governorates.

These studies have contributed to our knowledge of weeds and brought us toward a better understanding of the problems connected with the weed flora of Egypt. The authors are encouraged to publish their results.

How to Use this Book

The main part of this work comprises descriptions and detailed line drawings of 169 species of weeds. Some additional species are referred to and drawings of their characteristic parts are often given. These species altogether represent the most abundant weeds in the different habitats of the Nile basin within Egypt, where agricultural land dominates. Hydrophytes, or plants living exclusively in water, are excluded. Weeds in the semiarid

regions of the Mediterranean coastal belt are not included unless recorded from the Nile Valley.

The currently accepted scientific name is given for every species, subspecies, or variety, and occasionally one or more synonyms are listed. Arabic and English vernacular names are given whenever available. A description of the 169 main species as well as their habitats in Egypt and their general geographical distribution follows. The most significant uses of some species are mentioned when available. The medicinal uses of some weeds are mainly given by Boulos (1983) unless otherwise cited.

We recommend the use of the blank parts of the pages for writing additional notes, personal observations, and so forth. Those who are keen on collecting some weeds may also use this space for fixing small dried specimens of a characteristic part of the plant, such as a flowering of fruiting branch. This may serve as an additional and practical tool to help the users of this guidebook to learn more and in their own way about the weed flora of Egypt.

I. Flowering Plants

A. Dicotyledoneae (Dicots)

AMARANTHACEAE

Alternanthera sessilis (L.) DC., Cat. Hort. Monsp. 77 (1813).
Syn. *Gomphrena sessilis* L., Sp. Pl., ed.1, 225 (1753).

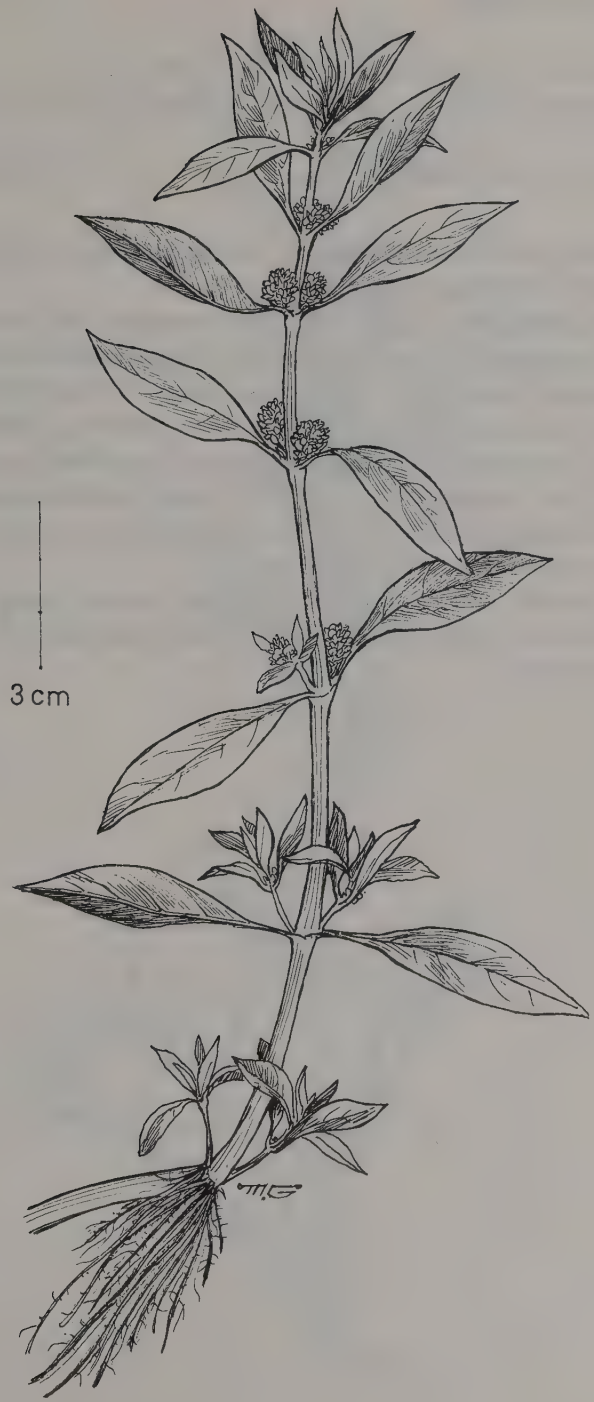
لُقمة الحَمَل *luqmat al-ḥamal* Sessile-flowered globe amaranth

Alternanthera from Latin *alternans* = alternating, and *anthera* = anther, alluding to the alternate anthers; *sessilis* = sessile or without stalk, describing the flower clusters.

Annual or perennial herb, rooting at the nodes; stems branching from the base, erect or prostrate; leaves variable in shape and size, generally linear-lanceolate, almost glabrous with entire or denticulate margins; flowers in axillary sessile clusters, with scarious bracts and bracteoles; fruit reddish or brownish; seeds almost globular, shining, with thick margins.

Drains, irrigation canals, rice fields.

Tropical and subtropical regions of the world.


3 cm

Amaranthus graecizans L., Sp. Pl., ed.1, 990 (1753).
Syn. *A. angustifolius* Lam., Encyc. Méth., 1:115 (1783) nom. illegit.

فِساء الكلب *fisa al-kalb* White pigweed

Amaranthus from Greek *amarantos* = unfading, referring to the lasting quality of the flowers and their retention of color.

Variable monoecious annual herb, branched from the base; stems angular, erect, decumbent or prostrate; leaves with prominent nerves on the lower surface; male flowers commonest in upper cymes; perianth segments 3, stigmas 3; capsule subglobose, 2mm diameter, stongly wrinkled with a short beak, exceeding the perianth; seeds black, compressed, shining. Three subspecies are known in Egypt: subsp. **graecizans**, subsp. **thellungianus** (Nevski) Gusev, and subsp. **silvestris** (Vill.) Brenan (cf. El-Hadidi and El-Hadidy 1981).

Fields, gardens, orchards, roadsides, especially in sandy soils.

Mediterranean, tropical Africa, western Asia; introduced into many parts of the world.

3 cm

Amaranthus hybridus L., Sp. Pl., ed.1, 990 (1753).
Syns. *A. cruentus* L., Syst. Nat., ed.10, 2:1269 (1759).
A. paniculatus L., Sp. Pl., ed.2, 1406 (1763) partly.
A. chlorostachys Willd., Hist. Amaranth., 34, t.10, fig.19 (1790).

رُعَاف *ruᶜᶜāf* Green amaranth

Hybridus = like a hybrid, sharing the characteristics of two species.

Variable monoecious annual or biennial herb, plant green or often with reddish tint, branched, glabrous below, thinly pilose toward the inflorescence; leaves broadly lanceolate to ovate, with long petioles; flowers yellowish to reddish, bristly in axillary and terminal inflorescences, male and female flowers intermixed; fruit a small capsule; seeds black, compressed, shining. Two subspecies and two varieties are known in Egypt (cf. El-Hadidi and El-Hadidy 1981).

Fields, orchards, waste ground.

Temperate and tropical regions of the world.

3cm

Amaranthus lividus L., Sp. Pl., ed.1, 990 (1753).
Syn. *A. ascendens* Lois., Not. Pl. France, 141 (1810).

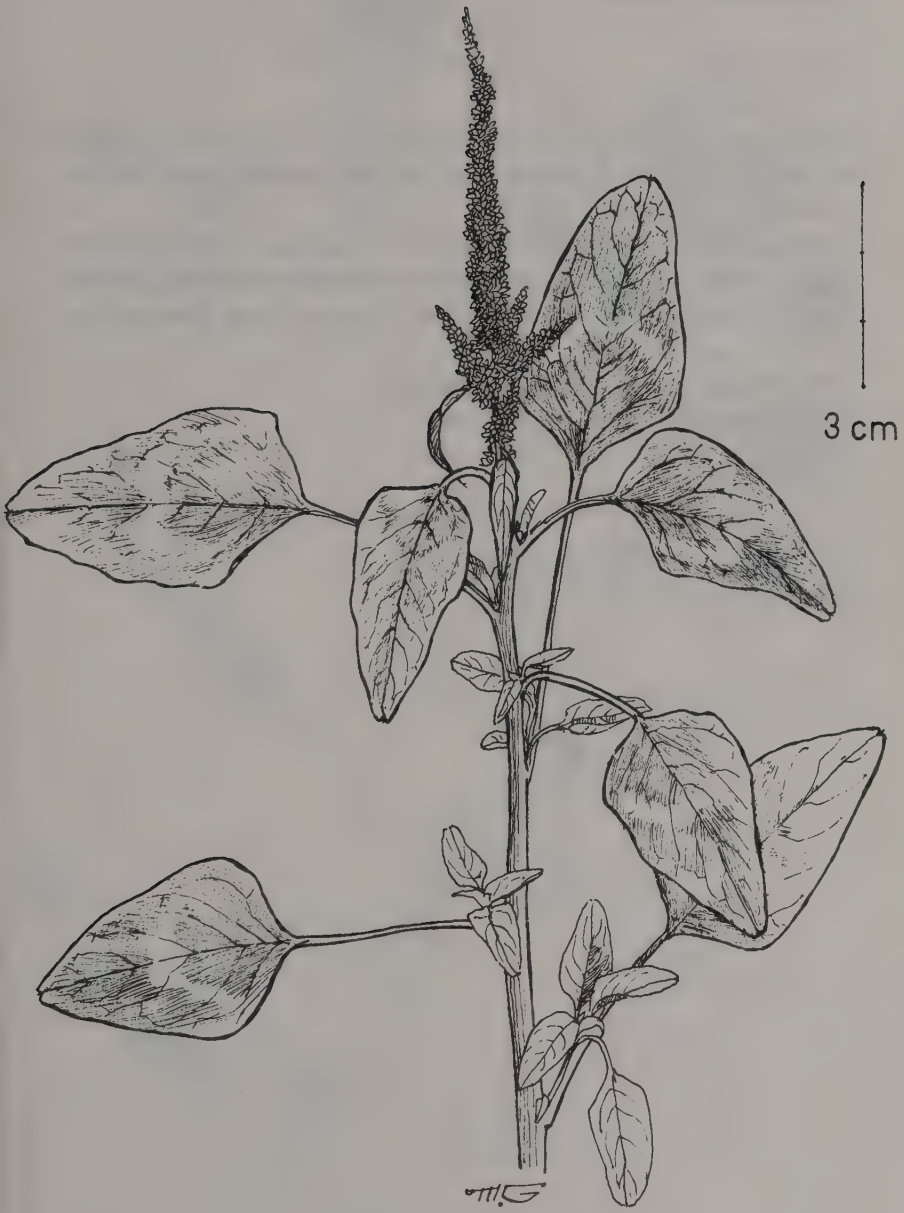
أمارانطون *āmārānṭūn*

Lividus = lead-colored, alluding to the color of the plant.

Annual herb, 20–60 cm, usually ascending, often prostrate; stems green or with a reddish tint, usually branching from the base, glabrous; leaves almost glabrous, ovate to rhomboid, long-petiolate, margins entire, apex emarginate; flowers green, arranged in dense spike-like terminal and lateral inflorescences, male and female flowers intermixed; perianth segments 3, membranous-margined, shorter than the capsule; fruit ellipsoid to subglobular capsule; seeds black, shining.

Cultivated fields, waste ground, ditch sides.

Widespread in warm and tropical regions of the world.


3 cm

Cynanchum acutum L., Sp. Pl., ed.1, 212 (1753).

مُدَّيد *muddēd*

Cynanchum from Greek *kyon* = dog, and *ancho* = to strangle, denoting the poisonous action of some species; *acutum* = tapering or pointed, describing the leaf apex.

Twining perennial herb, latex white; leaves petiolate, opposite, cordate, slightly pubescent; flowers whitish or rose-colored, in axillary peduncled cymes; corona segments triangular; fruit a narrow, linear, glabrous follicle.

Moist waste ground, Nile and canal banks.

Mediterranean, Europe, western Asia.

3 cm

Oxystelma alpini Decne. in DC., Prodr. 8, 543 (1844).

Syn. *O. esculentum* (L.f.) R. Br. ex Schult. in Roem. & Schult., Syst. Veg. 6:89 (1820) var. *alpini* (Decne.) N.E. Br. in Thiselton-Dyer, Fl. Trop. Afr. 4, 1:382 (1904).

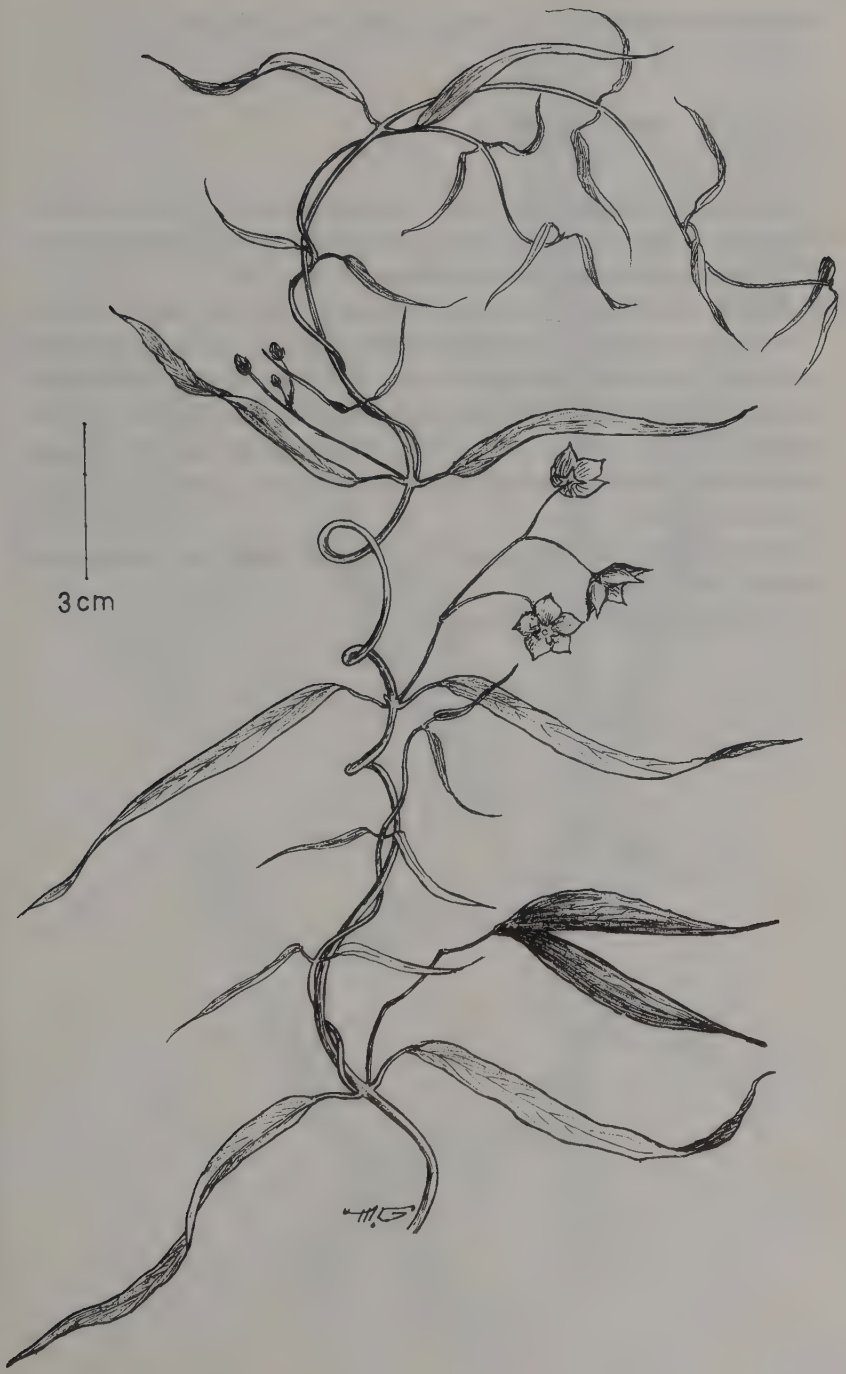
لِبّين *libbēn*

Oxystelma from Greek *oxys* = sharp, and *stelma* = crown or wreath, probably describing its flowers; *alpini* = belonging to the Alps, as the plants usually grow in mountainous regions or were first described from such regions.

Twining perennial herb, latex present; young stems white-tomentose, becoming glabrescent; leaves linear, acute, tapering to a short petiole; flowers in 2–5-flowered cymes, white or pink, with purple veins, corona of 5 erect pointed segments; fruit follicle, smooth, lanceolate, tapering at the apex.

Nile and canal banks, on **Phragmites australis** and other plants.

Arid and semiarid regions of Africa and Asia.


3 cm

Echium rauwolfii Delile, Descr. Egypte, Hist. Nat. 195, t.19, f.3 (1814).

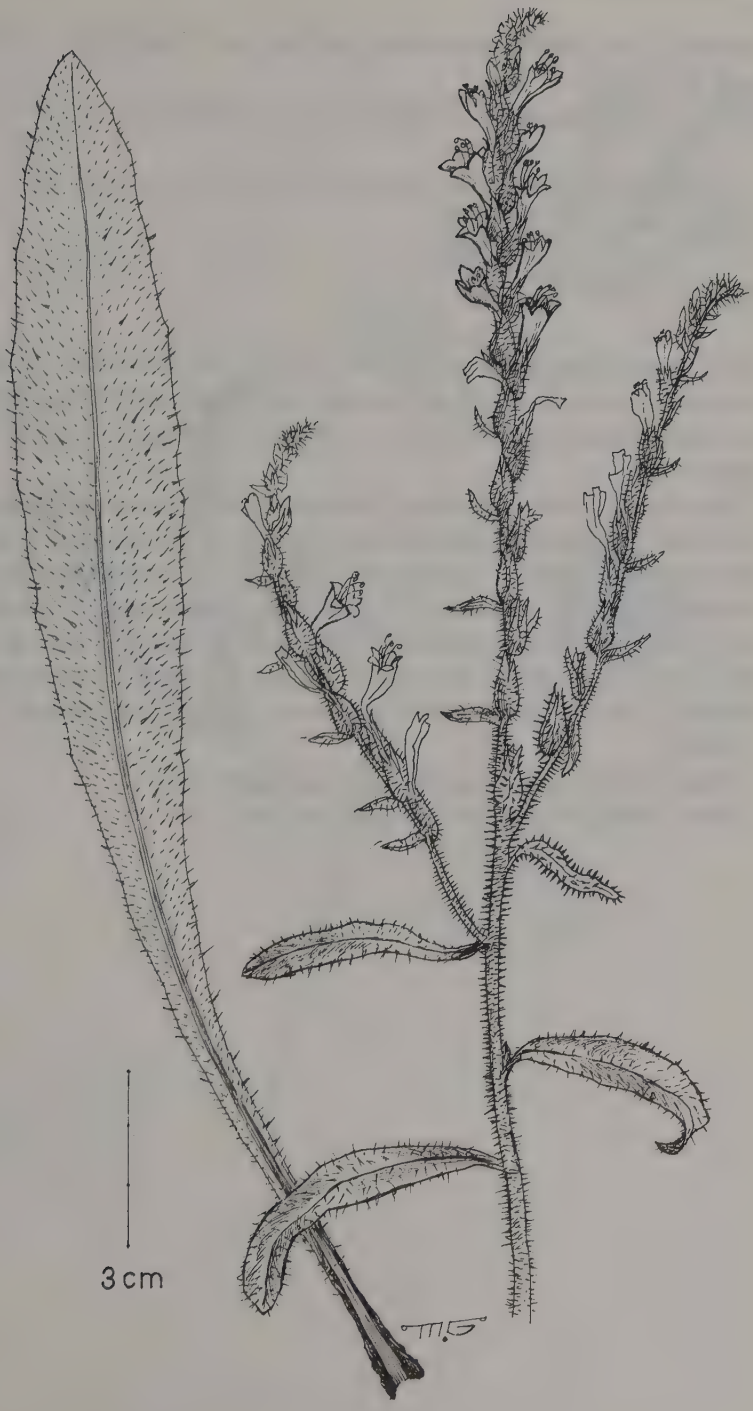
حِنَّة الغول *ḥinnat al-ghūl*

Echium from Greek *echis* = viper, as seeds resemble a viper's head, or from *echion*, the old Greek word for the plant; *rauwolfii* named in honor of the German naturalist Leonhart Rauwolf (died 1596).

Annual herb, 15–60 cm, densely covered with stiff white bristles; stems erect or prostrate, often branching from the base; lower leaves spathulate, petiolate; upper leaves linear-lanceolate, sessile; inflorescence mainly terminal; flowers zygomorphic, bluish violet; calyx about 1 cm, sepals unequal; corolla 1.5–2.5 cm, bluish violet; stamens slightly exserted from the corolla-tube; fruit 4 nutlets, glossy, almost smooth or slightly tubercled.

Waste ground, roadsides, especially in Upper Egypt; also encountered in some desert regions.

Arid Saharan belt of Africa, Arabia.


3 cm

Heliotropium lasiocarpum Fisch. & Mey., Ind. Sem. Hort. Petrop. 4, 38 (1838).

Syns. *H. europaeum* L. var. *tenuiflorum* (Guss.) Boiss., Fl. Or. 4:130 (1879).

H. ellipticum Ledeb. var. *lasiocarpum* (Fisch. & Mey.) Popov, Acta Hort. Petrop. 42:221 (1931).

عَقربانة *ᶜaqrabāna*

Heliotropium from Greek *heliotropion*, *helios* = sun, and *trope* = to run, in allusion to an old disproved idea that the flower heads turn with the sun; *lasiocarpum*, from *lasio* = hairy or woolly, in allusion to the woolly fruit.

Annual herb, 20–60 cm, covered with rather soft adpressed hairs; stems divaricately branching; leaves broadly elliptic to ovate, obtuse, petiolate; flowers sessile, in dense spicate inflorescences, becoming rather lax in fruit; calyx about 2 mm long, lobes hirsute, lanceolate, with a rather wide base, tips slightly incurved; corolla white, 1.5 times as long as the calyx, pubescent outside, with minute lobes; stigma elongate-conical, glabrous, tip bifid; nutlets 2 mm long, ovoid, densely covered with fine soft hairs.

Fields, roadsides, especially in sandy and loamy soils.

Eastern Mediterranean, southwestern and central Asia.

3 cm

Heliotropium supinum L., Sp. Pl., ed.1, 130 (1753).

زُرَيقة *zurrēqa*

Supinum = prostrate.

Annual herb, 20–50 cm, grayish, densely hairy; stems richly branched at the base, lateral branches prostrate, spreading; leaves shortly petioled, ovate to broadly elliptic, calyx 2.5–3 mm, hirsute; corolla white, hairy outside, tube slightly shorter than the calyx; fruit one nutlet (not 4 as in other species) falling when ripe together with the persistent calyx; nutlet 3–4 mm, thick-margined, glabrous.

Nile and canal banks.

Mediterranean, central Europe, western Asia extending eastward to India, northern and eastern Africa.

3 cm

Silene conoidea L., Sp. Pl., ed.1, 418 (1753).

زَعفر *zaᶜfar* Conoid catchfly

Silene probably derived from the Greek *sialon* = saliva, the gummy exudates on the stems of the plant; *conoidea* = cone-like, describing the shape of the fruit.

Annual viscid-pubescent erect herb, 15–50 cm; stem unbranched or sparingly branching from the base; basal leaves usually withered in mature specimens, narrowly oblong, petioled; cauline leaves larger, sessile, oblong-lanceolate, apex acute; flowers in irregular dichasium, corolla pink or pale red; calyx 30-nerved, subglobular in fruit; capsule flask-shaped, with a tapering neck and 6 apical teeth; seeds reniform, tuberculate-wrinkled.

Cultivated land, mainly in fields.

Mediterranean, western Asia to western Himalayas.

3 cm

Silene nocturna L., Sp. Pl., ed.1, 416 (1753).

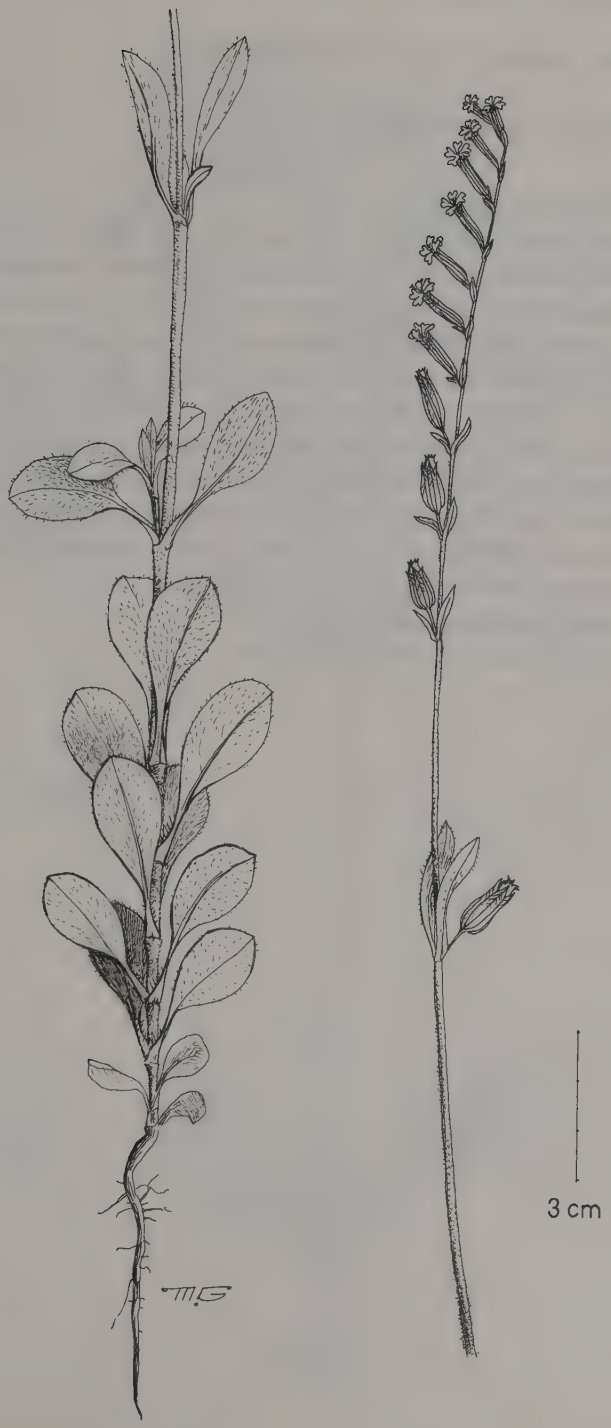
Night-flowering catchfly

Nocturna = flowering at night.

Annual herb, 20–50 cm, viscid above; stems ascending to erect, richly branching in well-developed specimens; basal leaves spathulate, apex rounded; upper cauline leaves narrowly oblanceolate to linear, sessile; inflorescence raceme-like monochasium; lower flowers pedicelled, upper sessile or subsessile; calyx narrowly ovoid to cylindrical, 10-nerved; corolla whitish or pink; capsule ovoid-cylindrical; seeds very small, reniform, wrinkled-tuberculate, grooved on the back.

Cultivated land, mainly fields.

Mainly Mediterranean; introduced elsewhere.


3 cm

CARYOPHYLLACEAE

Silene rubella L., Sp. Pl., ed.1, 419 (1753).

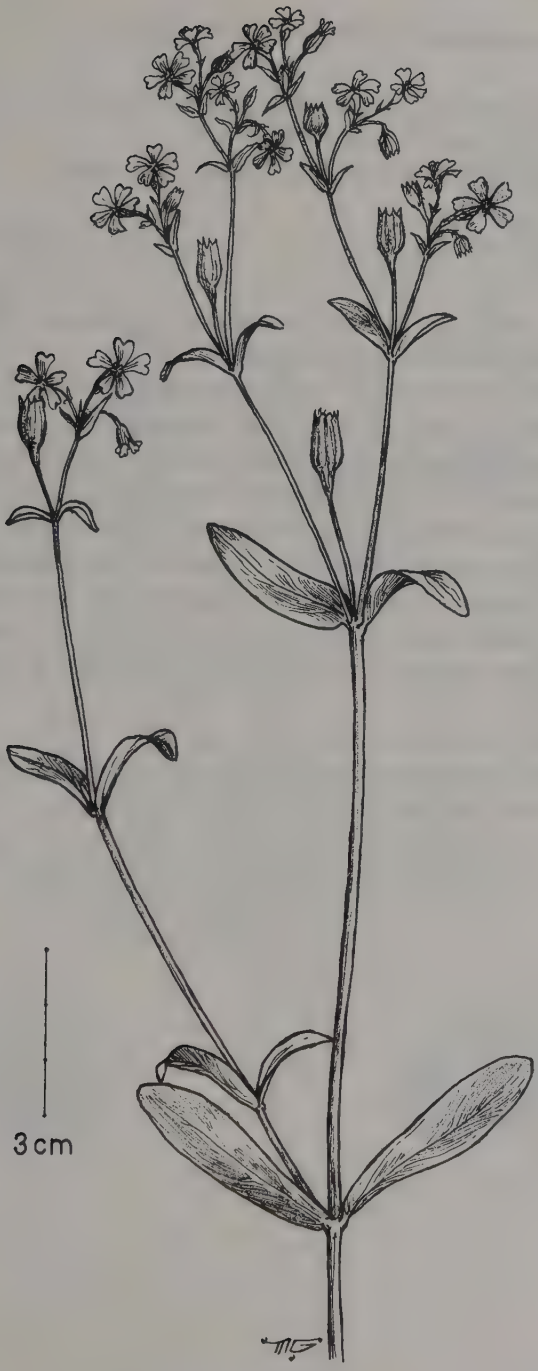
أبو النُّجف *abu al-nagaf*

Rubella = shining red.

Erect annual herb; 20–80 cm; stems simple or branching at the base, almost glabrous; basal leaves spathulate, glabrous with ciliate margins and obtuse apex, base narrowed into a petiole; upper leaves oblong, sessile, smaller than the basal leaves; inflorescence a condensed unequally branched dichasium with leafy bracts; flowers pedicelled, calyx papery, white or purplish, 10-nerved, slightly constricted at the apex, calyx-teeth 1.5 mm, with strongly ciliate margins; petals pink, about 10 mm long, prominent coronal scales are fused to the outer margins of the petals; stamens 6 mm long, with glabrous filaments; capsule about 8 mm, oblong, with a wide mouth and short recurved apical teeth; seeds reniform, 1 mm long, dark brown, with fine, sharp regular ridges.

Fields, irrigation canals, gardens.

Mediterranean, extending eastward to Iraq.


3 cm

Spergularia marina (L.) Griseb., Spic. Fl. Rum. et Bith., 1:213 (1843).

Syns. *Arenaria rubra* L. var. *marina* L., Sp. Pl., ed.1, 423 (1753).
A. marina (L.) All., Fl. Ped. 2:114 (1785).
Spergularia salina J. & C. Presl, Fl. Cech., 95 (1819).

أبو غُلام *abu ghulām* Sand spurrey

Spergularia from Latin *spergula*, alluding to the scattering of seeds; *marina* = growing near the sea or in salt marshes.

Annual or biennial herb, 15–40 cm, erect or spreading; stems branching near the base, glabrous, upper parts glandular in mature specimens, green or purplish; leaves slender, fleshy, narrowly linear, acute; stipules broadly deltoid; inflorescence irregular cymes, flowers pedicelled; sepals narrowly ovate, with scarious margins and a narrow green or purplish median band; petals pink to whitish; stamens with glabrous filaments which are expanded toward the base, anthers yellow; capsule ovoid, with 3 boatlike valves; seeds compressed, pyriform, blackish brown, papillose-tuberculate, winged and unwinged mixed together in the same capsule.

Muddy and moist saline soils.

Widespread in temperate coastal regions of the Northern Hemisphere, also in Australasia where it might have been introduced.

3 cm

CARYOPHYLLACEAE

Stellaria pallida (Dumort.) Piré, Bull. Soc. Roy. Bot. Belg. 2:49 (1863).

Syn. *Alsine pallida* Dumort., Fl. Belg., 109 (1827).

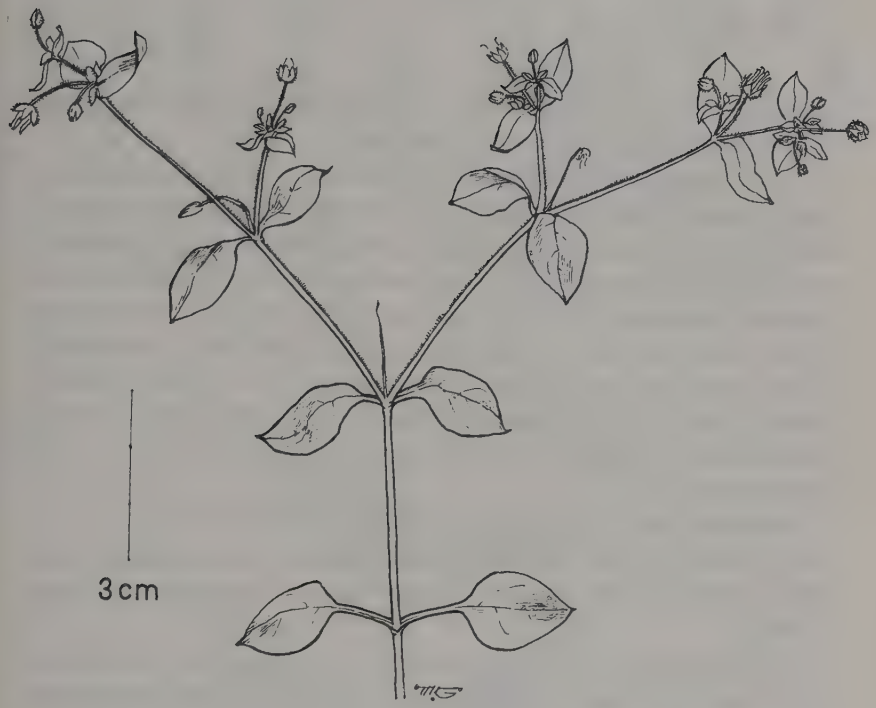
حَشيشة القِزَاز *ḥashīshat al-qizāz* Chickweed

Stellaria from Latin *stella* = star, describing the starry flowers of the plant; *pallida* = pale, alluding to the pale color of the plant.

Delicate pale green annual herb, 10–30 cm; stems very slender, terete, with one or two rows of hairs, rarely glabrous; inflorescence few- or many-flowered, pedicels short; sepals 3 mm, often gray-tomentose; petals very small or absent; stamens 1–3, rarely 5; seeds yellowish brown, tubercled.

Shaded, moist, cultivated ground, especially in gardens and orchards.

Mediterranean, Europe, northwestern Asia.


3 cm

Vaccaria hispanica (Miller) Rauschert, Wiss. Zeitschr. Martin-Luther-Univ. Halle-Wittenberg, Math.-Naturwiss. Reihe 14:496 (1965).

Syns. *Saponaria hispanica* Miller, Gard. Dict., ed.8, in Errat. (1768).
Vaccaria pyramidata Medicus, Phil. Bot. 1:96 (1789).
Saponaria vaccaria L., Sp. Pl., ed.1,409 (1753).
Vaccaria parviflora Moench, Meth. 63 (1794).
V. segetalis (Neck.) Garcke in Aschers., Fl. Brandenb., 1:84 (1860).

فول العرب *fūl al-ᶜarab* Cow-herb

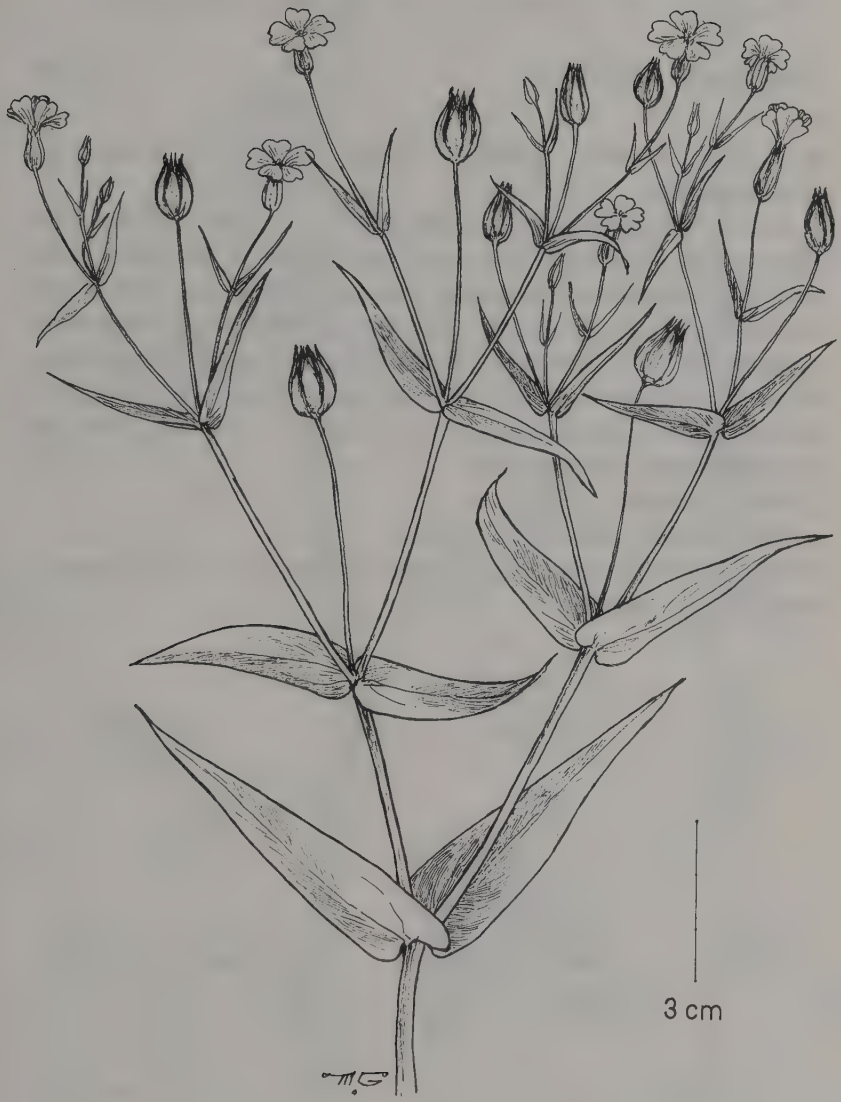
Vaccaria = increasing the milk production of cows; *pyramidata* = pyramid-like, an allusion to the shape of the plant.

Erect annual herb, 20–80 cm; stems glabrous, richly branched above, swollen at the nodes; leaves glabrous, lower leaves tapering at the base, upper clasping or connate; inflorescence richly branched, lax, dichasial; pedicels 2–6 cm, subtended by lanceolate purplish bracts; calyx in flower buds and flowers almost cylindrical, whitish green, with 5 conspicuous darker green wings, later becoming urceolate in fruit, with a constricted mouth; petals pink, conspicuus; stamens subequal, with yellow anthers; capsule broadly oviod to almost globose, with a hard, yellow exocarp, opening by 4 triangualr teeth; seeds almost globose, dark brown, papillose-verruculose.

Cultivated fields, especially with winter crops.

Widespread in Mediterranean, central Europe, Asia; introduced into other warm temperate regions of North America, Australia, and New Zealand.

The plant is used as a cut green in flower shops and as a medicinal herb. The root is vulnerary and galactogogue (increases the secretion of milk).


3 cm

Beta vulgaris L., Sp. Pl., ed.1, 222 (1753) subsp. **maritima** (L.) Arcang., Comp. Fl. It. 593 (1882).

Syns. *B. maritima* L., Sp. Pl., ed.2, 322 (1762).

B. vulgaris L. var. *maritima* (L.) Boiss., Fl. Orient. 4:899 (1879).

ضِرس الكلب *ḍirs al-kalb* Sea beet

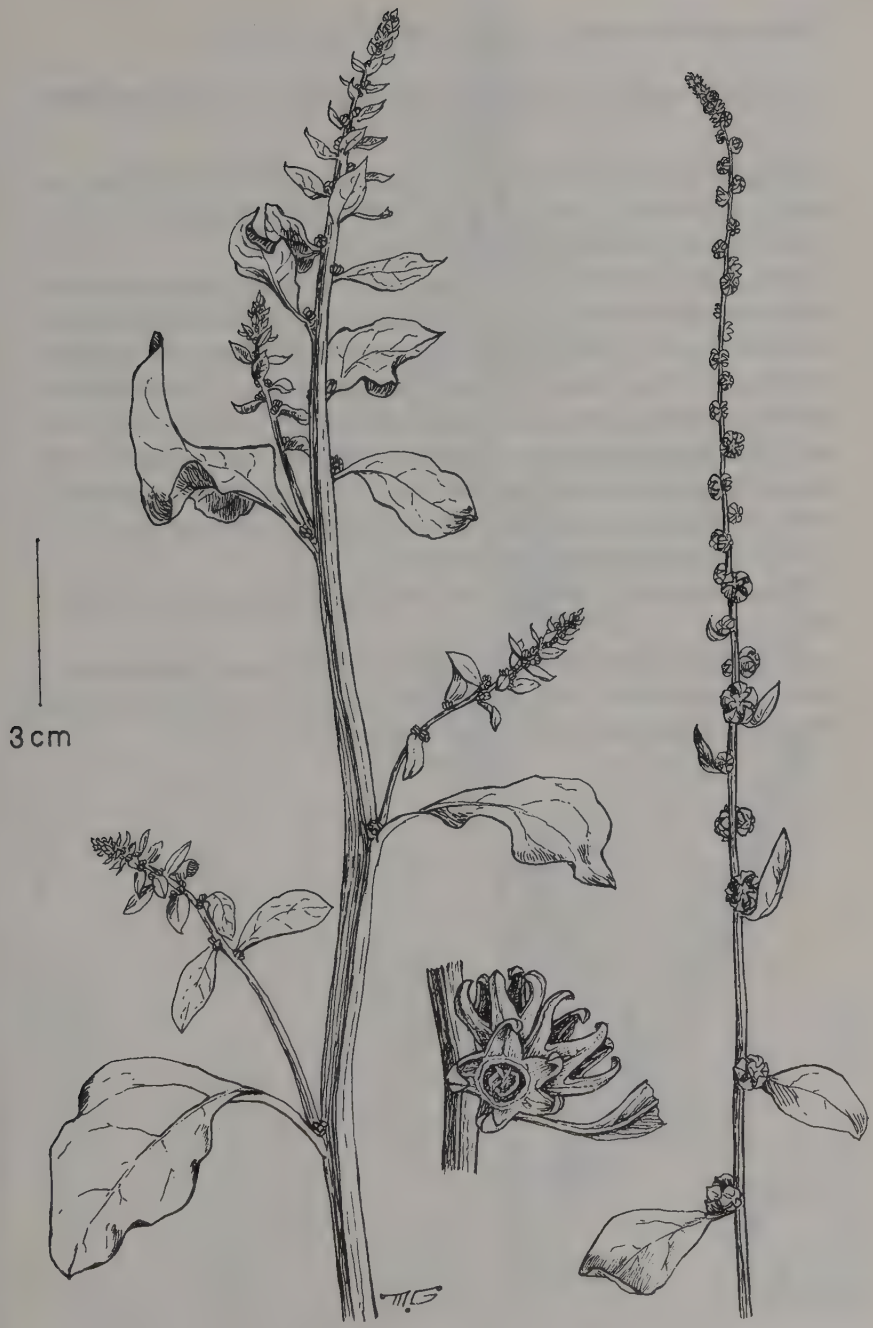
Beta = old Latin name; *vulgaris* = common; *maritima* = confined to the coast or seashore.

Annual, biennial, or perennial herb, 20–80 cm, glabrous or sparingly pilose; stems richly branching from the base; leaves dark green, often reddish, basal leaves often forming a rosette, ovate-cordate, apex obtuse; cauline leaves rhombic-oblong, petiolate, becoming sessile upwards; flowering clusters 2–4-flowered, in long interrupted spike-like leafy inflorescences; perianth lobes 5, green, fleshy, thickening in fruit; stamens 5, inserted on the rim of a glandular perigynous disc; ovary 3-carpelled, adherent to the base of the perianth.

Fields, roadsides.

Mediterranean, Europe, western Asia.

Beta vulgaris is the origin of some cultivated varieties of beetroot, sugar beet, and mangold.


3 cm

Chenopodium album L., Sp. Pl., ed.1, 219 (1753).

رُكَب الجمل *rukab al-gamal* White goosefoot, Common lambsquarters

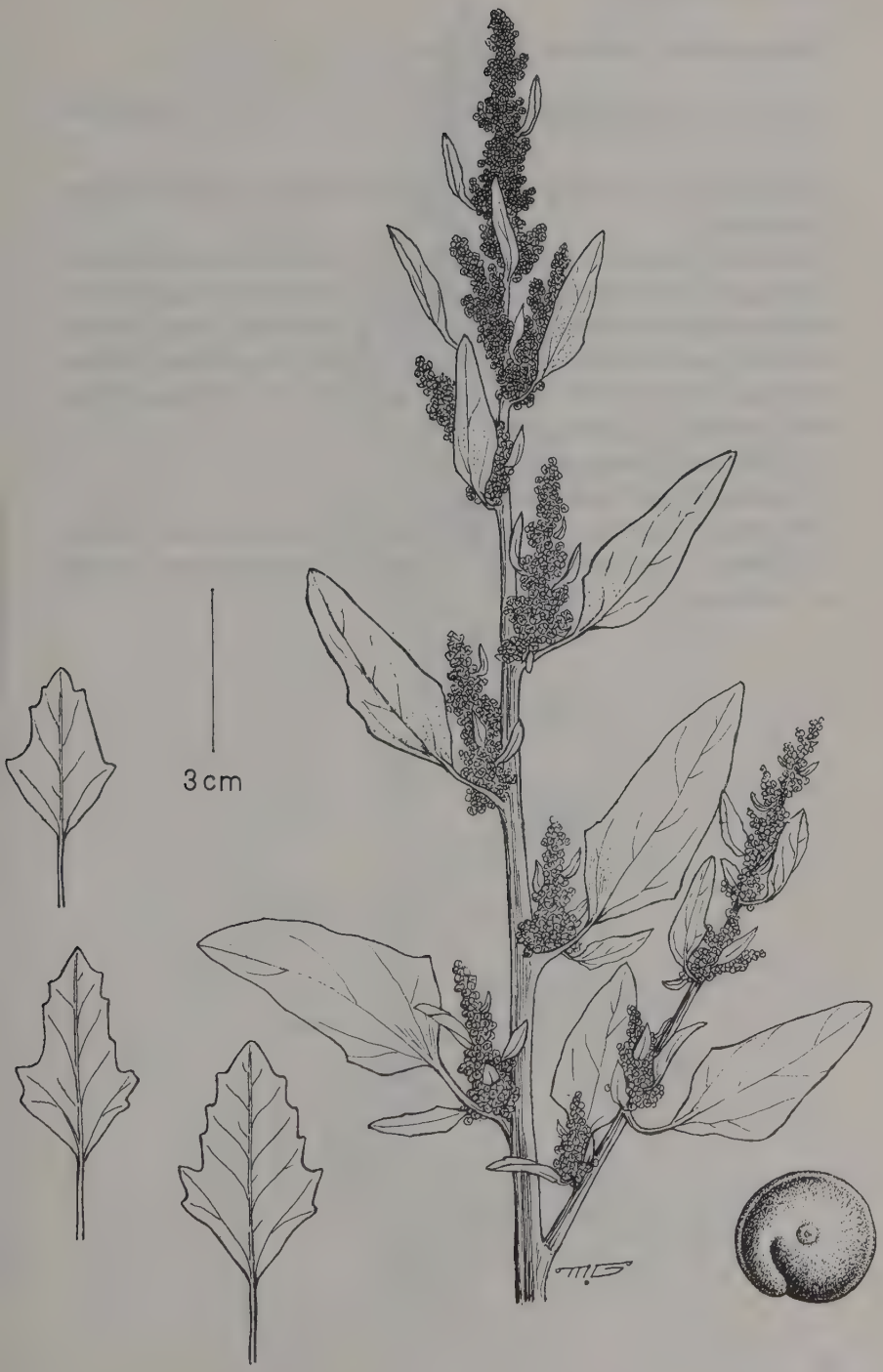
Chenopodium from Greek *chen* = a goose, and *podion* = little foot, alluding to the shape of the leaf which resembles a goosefoot; *album* = white, referring to the mealy white aspect of the plant.

Annual herb, 20–80(–120) cm, pale green or mealy white, especially the flowers and the lower surface of the leaves; stems much branched, angled, often with reddish stripes; lower leaves deltoid to rhombic, upper lanceolate to linear, dentate-sinuate, uppermost entire; flower clusters densely grouped in paniculate inflorescences, axillary and terminal; perianth lobes 5, keeled, scarious-margined, white mealy to greenish, with scarious margins; stamens 5; anthers yellow; ovary subglobose, glabrous, style very short; seeds lenticular, 1.5 mm diameter, black, shining.

Fields, gardens, roadsides, waste places.

Widespread weed of the Old World; introduced and naturalized into the New World.

According to Zohary (1966), this species was formerly cultivated as a bread plant because of its highly nutritive seeds. It has a high vitamin C content and is used as a salad plant and in medicine.


3 cm

CHENOPODIACEAE

Chenopodium ambrosioides L., Sp. Pl., ed.1, 219 (1753).

نِتنة ، مِنتنة *nitna, mintina* Wormseed

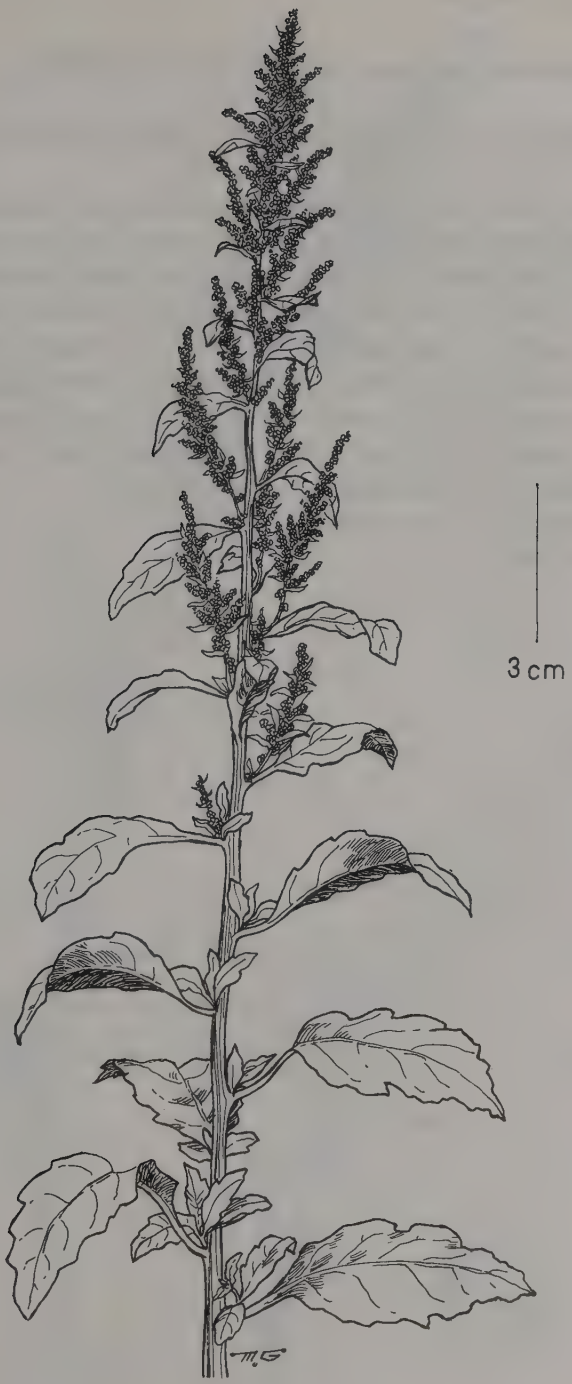
Ambrosioides = resembling *Ambrosia* in aspect; see *Ambrosia maritima*, Compositae.

Annual or biennial aromatic herb, 20–80 cm, of a disagreeable odor; stems erect, branching, simple if growing in dry habitats; leaves short-petioled, elliptic-lanceolate, sinuate-dentate, uppermost entire, all with yellowish glands on the lower surface; flowers in dense clusters forming elongated spikes in a leafy panicle; perianth lobes 4–5, not keeled, glandular; stamens 4–5; seeds glossy.

Nile and canal banks, moist ground.

Naturalized from South America.

The plant is used medicinally as a vermifuge, antiasthmatic, diuretic, etc. (Zohary 1966; Boulos 1983). In South America, its leaves are used as a condiment.


3 cm

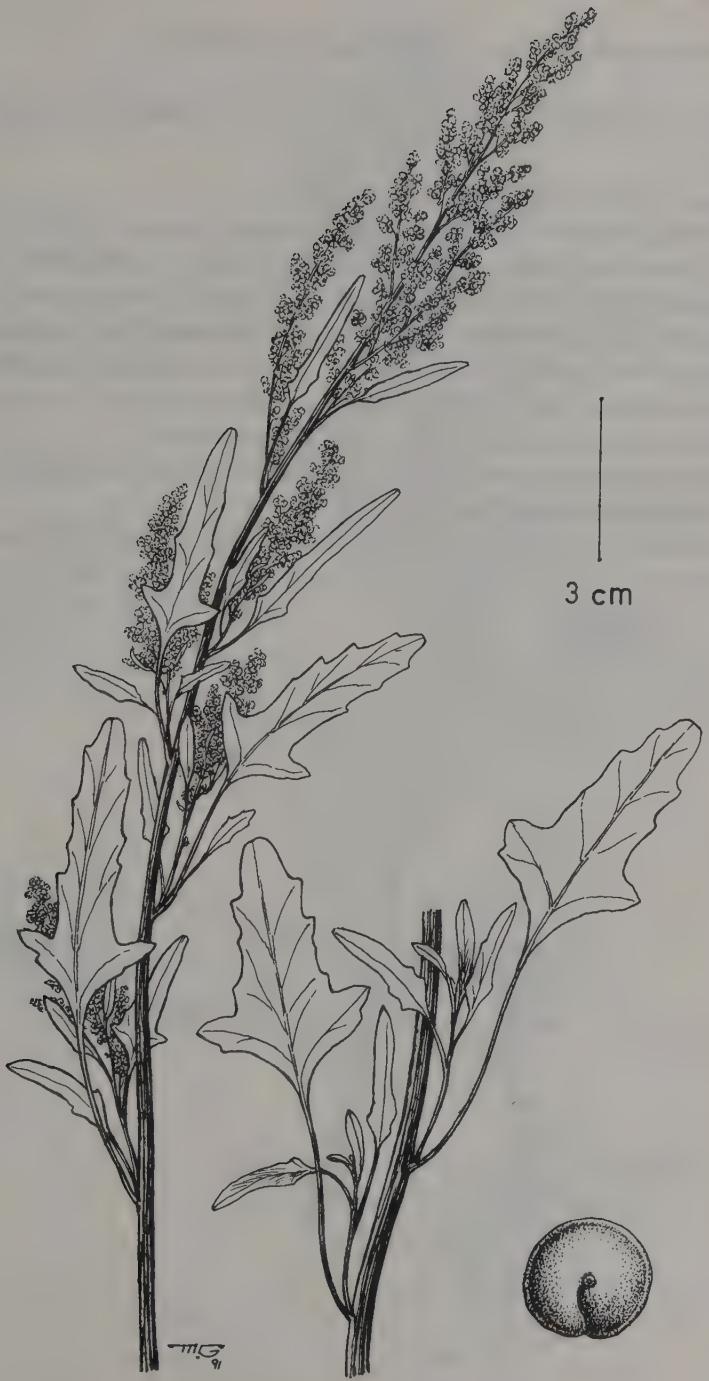
Chenopodium ficifolium Sm., Fl. Brit. 1:276 (1800).

Ficifolium from *fici* = relating to figs. Leaves resemble those of fig plant.

Annual herb, 25–80(–120) cm, whitish green, mealy; stems erect or ascending, angled, striate; leaves distinctly longer than broad, mealy on lower surface, some distinctly 3-lobed; lateral lobes triangular, shorter than median lobes; margins sparsely and coarsely toothed, apex broadly obtuse; petiole 1–5 cm; inflorescence terminal and lateral, of paniculate cymes, mealy, at first dense, becoming lax in late flowering and fruiting stages; perianth lobes 5, connate to half of their length, densely farinose; stamens usually 5; seeds horizontal, black, glossy, keeled, with pericarp firmly adherent to seed, about 1.2 mm in diameter.

Cultivated fields, waste ground.

Europe, Asia.


3 cm

Chenopodium murale L., Sp. Pl., ed.1, 219 (1753).

أبو عِفين *abu ʿifēn* Nettle-leaved goosefoot

Murale = growing on walls.

Annual green herb, 10–80 cm; stems branching, angular and thickened at the base; leaves rather fleshy, petiolate, rhombic-ovate, irregularly serrate, apex acute, glabrous to slightly mealy, especially on the lower surface; flowers in small clusters forming terminal and axillary paniculate inflorescences; perianth lobes 5, green, connate at the base; stamens 5; anthers yellow; ovary glabrous; seeds 1.2–1.5 mm diameter, lenticular, strongly keeled along the margin, black, minutely pitted.

Fields, gardens, orchards, roadsides, irrigation canals, waste ground.

Widespread cosmopolitan weed.

According to Zohary (1966), the plant (i.e., its leaves) is used as a salad herb.

3 cm

Gynandropsis gynandra (L.) Briq., Ann. Conserv. Jard. Bot. Genève 17:382 (1914).

Syns. *Cleome gynandra* L., Sp. Pl., ed.1, 671 (1753).
Gynandropsis pentaphylla (L.) DC., Prodr. 1:238 (1824).

أبو قَرن *abu qarn* Spider flower

Gynandropsis from Greek *gyne* = female, *andros* = male, and *opsis* = appearance, from the manner in which the stamens appear to be inverted on the top of the ovary; *gynandra* = combining both sexes, because stamens are attached to the pistil.

Annual herb, 20–80 cm; stems simple or branching; leaves alternate, lower leaves 5-foliate and long-petioled, upper 3-foliate and short-petioled; leaflets obovate, with entire or finely toothed margins and acute apex; flowers in long terminal racemes, 4-fid, white or purplish violet, pedicels long, bracts leafy, sepals 4, petals 4 with narrow claws; stamens 6, with long purple filaments arising from a much elongated receptacle, anthers orange yellow; ovary and stamens borne on an elongated stalk gynophore; capsule narrow spindle-shaped, 5–10 cm, many-seeded.

Fields, orchards, gardens, waste ground.

Africa, Asia; introduced into the New World.

The leaves are edible as a green vegetable.

3cm

COMPOSITAE

Ageratum conyzoides L., Sp. Pl., ed.1, 839 (1753)

بُرجمان *burgumān* Goat weed

Ageratum from Greek *a* = not, and *geras* = old, or from *ageratos* = not growing old, presumably because the flowers retain their color for a long time; *conyzoides* = resembling *Conyza* in aspect, see *Conyza* spp., Compositae.

Annual herb, 20–50 cm, softly hairy; stems much branching; leaves opposite, triangular to cordate, petiolate, margins serrate, apex acute; inflorescence terminal, of several branches, each bearing a few flower heads, forming corymb-like clusters; flowers blue or pale blue, tubular; fruit one-seeded, black, ribbed, crowned with 5 white bristles.

Nile and canal banks.

Introduced from tropical and subtropical America, naturalized.

Tropical and subtropical North and South America; introduced into the Old World in many tropical and subtropical countries.

The plant is often cultivated for its showy flowering shoots in gardens and is also used as a cut flower. It is used as a remedy for abdominal problems and digestion and has other medicinal properties (cf. Boulos 1983).

3cm

Ambrosia maritima L., Sp. Pl., ed.1, 988 (1753).

دَمسيسة *damsīsa* Sea ambrosia

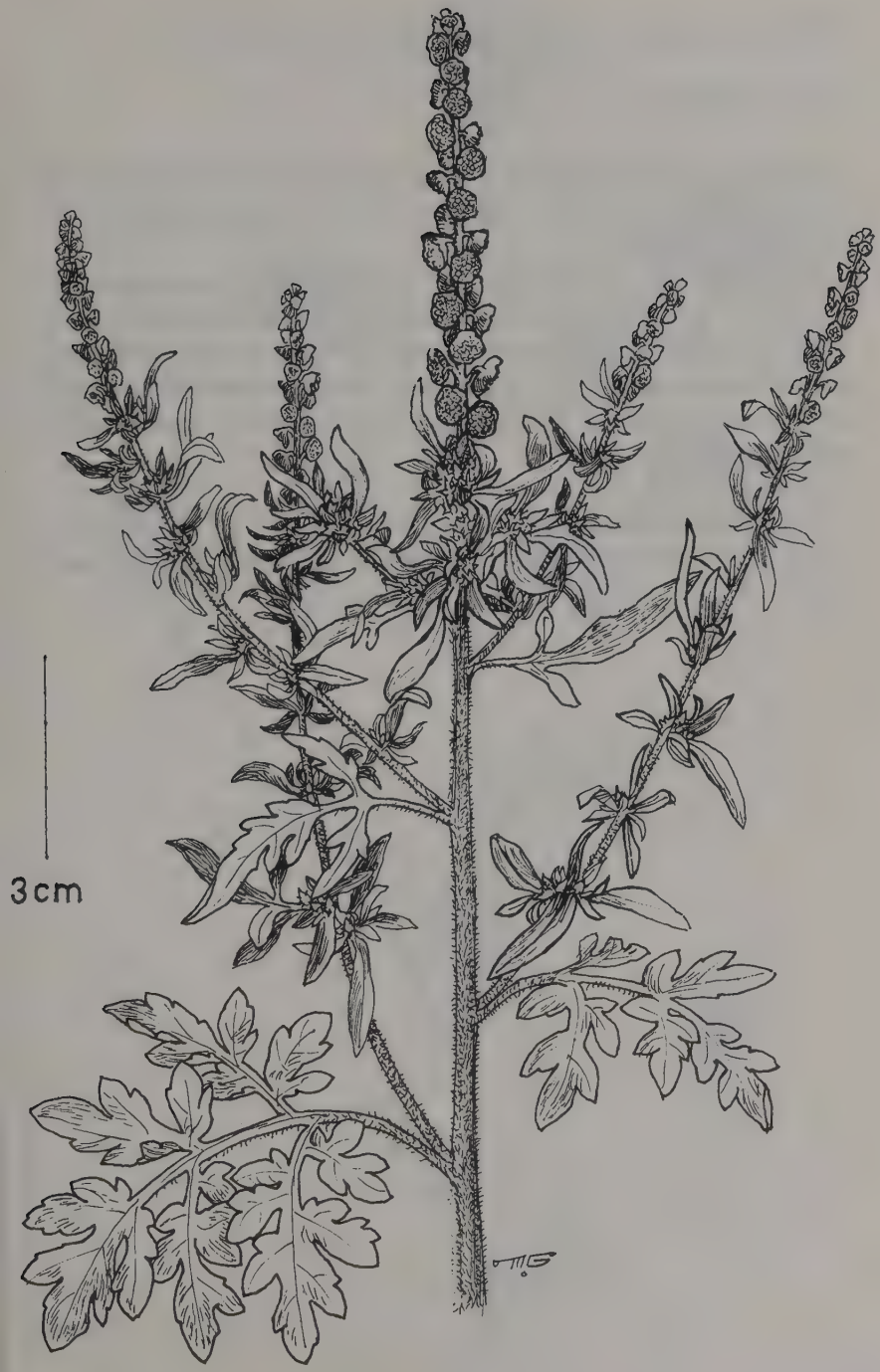
Ambrosia from Greek *ambrosia* of ancient mythology, a substance with nectar used as food of the gods; *maritima* = confined to the coast or seashore.

Annual herb with tendency to perennate, 20–80 cm, gray-hairy; stems often woody below; leaves fragrant, ovate in outline, densely hairy below, petiolate, bipinnatipartite to pinnatisect, lobes dentate; flower head yellow, small; male heads 10–20-flowered, situated above the 1-flowered female heads which ripen into a small prickly fruit; involucre of fruiting head ovoid, reticulately nerved.

Nile and canal banks, moist alluvial soils.

Mediterranean.

The plant is used in folk medicine to expel kidney stones and to remedy renal troubles, asthma, and bilharzia.


3cm

COMPOSITAE

Anthemis pseudocotula Boiss., Diagn., 1, 6:86 (1846).

إربّيان *iribbayān*

Anthemis is a Greek name for an aromatic plant used as flavoring and medicinal herb; *pseudocotula*, *pseudo* = false, which means falsely looks like *Cotula*, Compositae.

Annual glabrescent herb, 15–60 cm; stems branching from above the base; leaves finely bipinnatisect, with crowded segments; disc flowers yellow, ray flowers white; flowering peduncles long, gradually thickened after anthesis, especially toward the heads; involucral bracts with scarious margins; achenes ribbed, persistent at maturity, brownish, apex truncate with spreading corona.

Fields, roadsides.

Eastern Mediterranean, western Asia.

The flower heads are used as a bacteriostat, antifungal, antitumor, and antidiabetic.

3cm

Aster squamatus (Spreng.) Hieron. in Engl., Bot. Jahrb. 29:19 (1900).
Syn. *Conyza squamata* Spreng., Syst. Veg. 3:515 (1825).

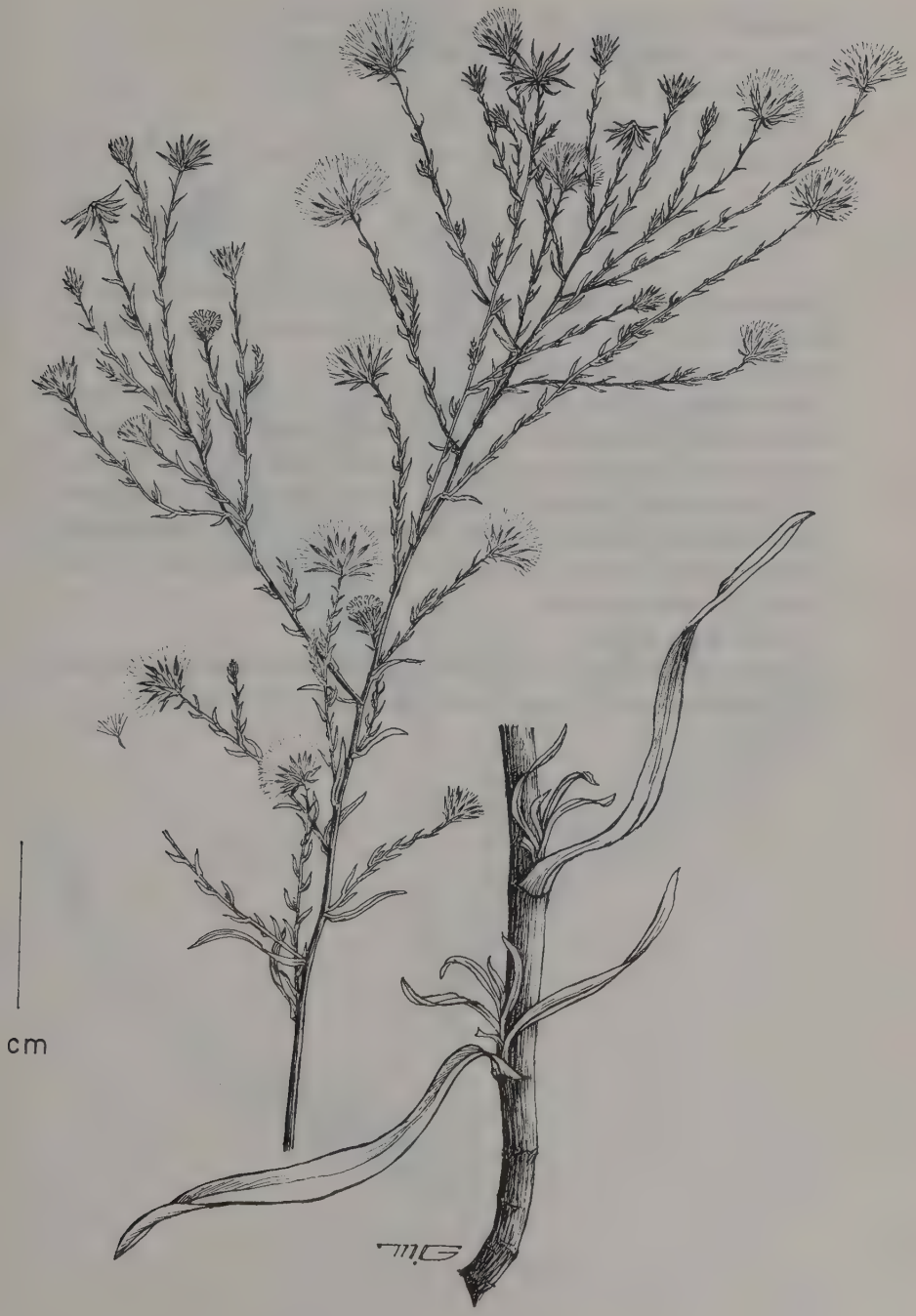
Aster = star, allusion to the form of the flower head; *squamatus* = furnished with scales.

Annual or biennial herb, 20–80(–120) cm, becoming stiff and frutescent before drying; stems erect or ascending, glabrous; leaves linear to linear-lanceolate, entire, alternate, sessile; heads in richly branched panicles; involucral bracts in 3 rows, oblong to oblanceolate, apex purplish, serrulate, ending with a sharp point; flowers violet blue, ligulate flowers more numerous than tubular florets; achenes 2 mm long, narrowly oblong, slightly compressed, brownish, thinly pilose.

Fields, roadsides, gardens, waste ground, canal banks.

Recently introduced into Egypt, now completely naturalized and one of the most widespread weeds in the country.

Central and South America; naturalized in southern Europe, Africa, and many other regions of the world.


cm

Calendula arvensis L., Sp. Pl., ed.2, 1303 (1763).
Syns. *C. aegyptiaca* Pers., Syn. Plant., 2:492 (1807).
C. persica C.A. Mey., Verz. Pflanz. Cauc., 72 (1831).
C. gracilis DC., Prodr. 6:453 (1837).
C. micrantha Tineo & Guss. in Guss., Fl. Sic. Syn., 2:874 (1845).

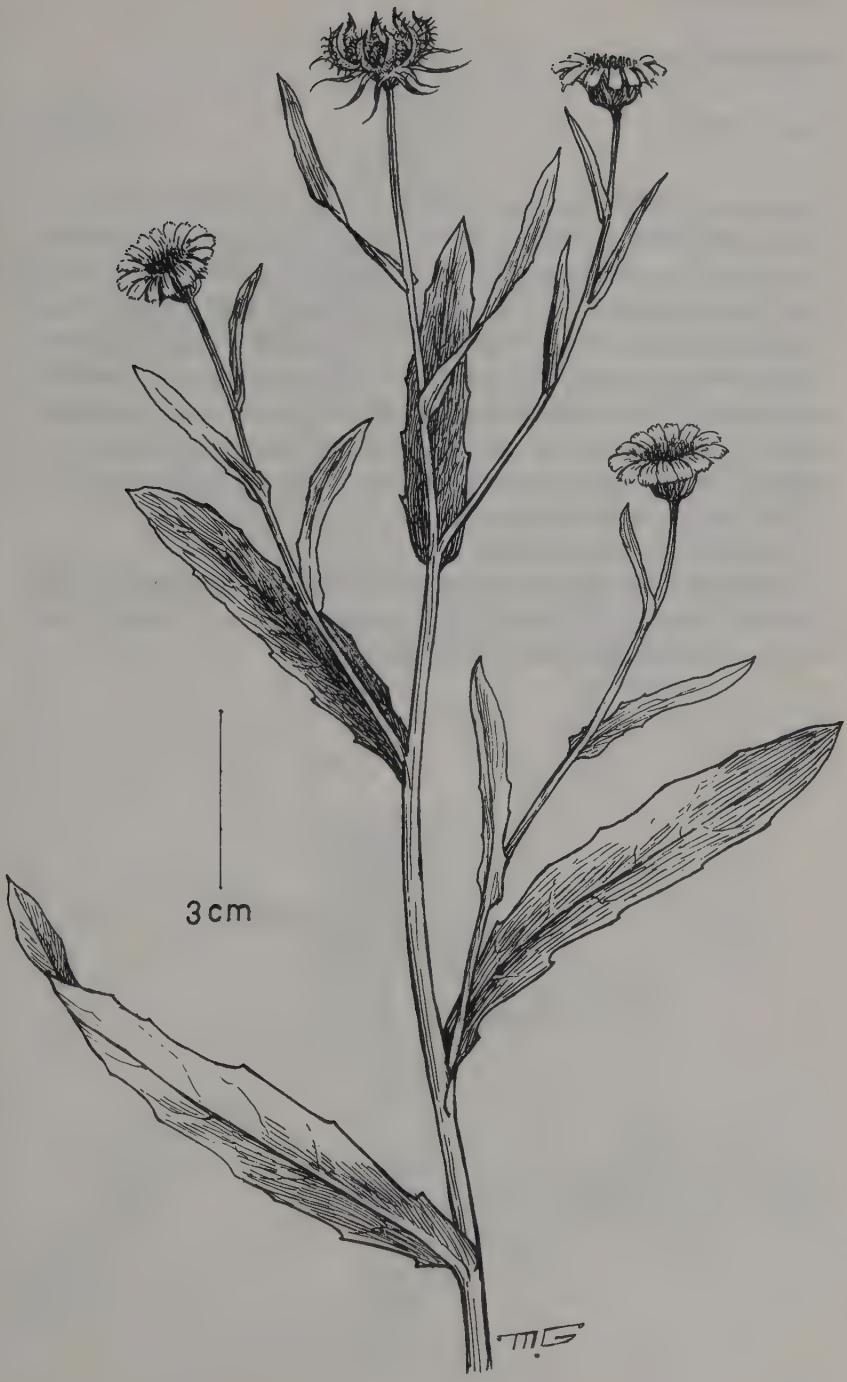
عين البقر *ʿayn al-baqar* Field marigold

Calendula from Latin *calendae* = the first day of the month, probably referring to the long flowering period of the plant; *arvensis* = growing in or pertaining to cultivated fields.

Multiform, glandular-pubescent, annual herb, 15–60 cm; stems richly branching from the base, erect or decumbent; leaves oblong-lanceolate, entire or serrate, lower leaves petiolate, upper sessile and slightly auriculate; flower heads solitary, yellow or orange, often with brownish disc flowers; achenes variable in shape within the same head, always beaked, the outer achenes spiny, the middle with inflated margin and the inner wrinkled on the outer side.

Fields, waste ground.

Mediterranean, central Europe, western Asia; introduced and naturalized into many temperate and warm temperate regions of the world.


3 cm
M.G

COMPOSITAE

Centaurea calcitrapa L., Sp. Pl., ed.1, 917 (1753).

شوك *shūk* Star thistle

Centaurea from Greek *kentauros* which, in the fables of ancient Greece, is said to have healed a wound in the foot of Chiron; *calcitrapa* = foot trap.

Annual or biennial glandular-pubescent herb, 25–80 cm; stems richly branching from the base, ascending to erect; branches diverging, arising just below the older flower heads; leaves green, slightly glandular hairy, lower leaves pinnatisect, upper smaller and pinnatifid, uppermost lanceolate to hastate; flower heads almost sessile; involucral bracts coriaceous, with scarious margins and long apical spines; flowers pale purple, all tubular, the outer ones larger and radiating; achenes without pappus.

Canal banks, roadsides, waste ground.

Mediterranean, central Europe.

The whole plant is a bitter astringent, appetizer, and stomachic. The flowering summits are febrifuge, and the root and fruits are diuretic. The seeds are used to remedy renal stones and pains.

3cm

Ceruana pratensis Forsskål, Fl. Aegypt.-Arab., 74 (1775).

جَرَوَان *garawān*

Ceruana is most probably derived from its Arabic vernacular name *garawān*, as the plant was described from Egypt; *pratensis* = growing in meadows.

Annual hairy herb, 15–60 cm; stems stout, becoming stiff and rather woody upon maturity; lower leaves spathulate, attenuated at the base, margins serrate to crenate; upper leaves smaller, sessile, clasping; heads short-peduncled, terminal and in the axils of upper branches; all flowers discoid, pappus absent.

The plant used to be rather abundant on the muddy Nile banks and major irrigation canals, especially in Upper Egypt. After the construction of the Aswan High Dam, however, less and less silt was deposited in the Nile basin north of the Dam, thus creating an unfavorable habitat for the plant which resulted in the disappearance of most of the populations.

Egypt, Sudan, tropical northwestern Africa.

In ancient Egypt mature plants were used for making baskets and mummy coffins. In modern times the plants have been used for making brooms.

3 cm

Cichorium endivia L., Sp. Pl., ed.1, 813 (1753).
Syn. *C. pumilum* Jacq., Obs. Bot. 4:3, t.80 (1771).

سِريس ، شيكوريا *sirēs, shīkūrya* Chicory

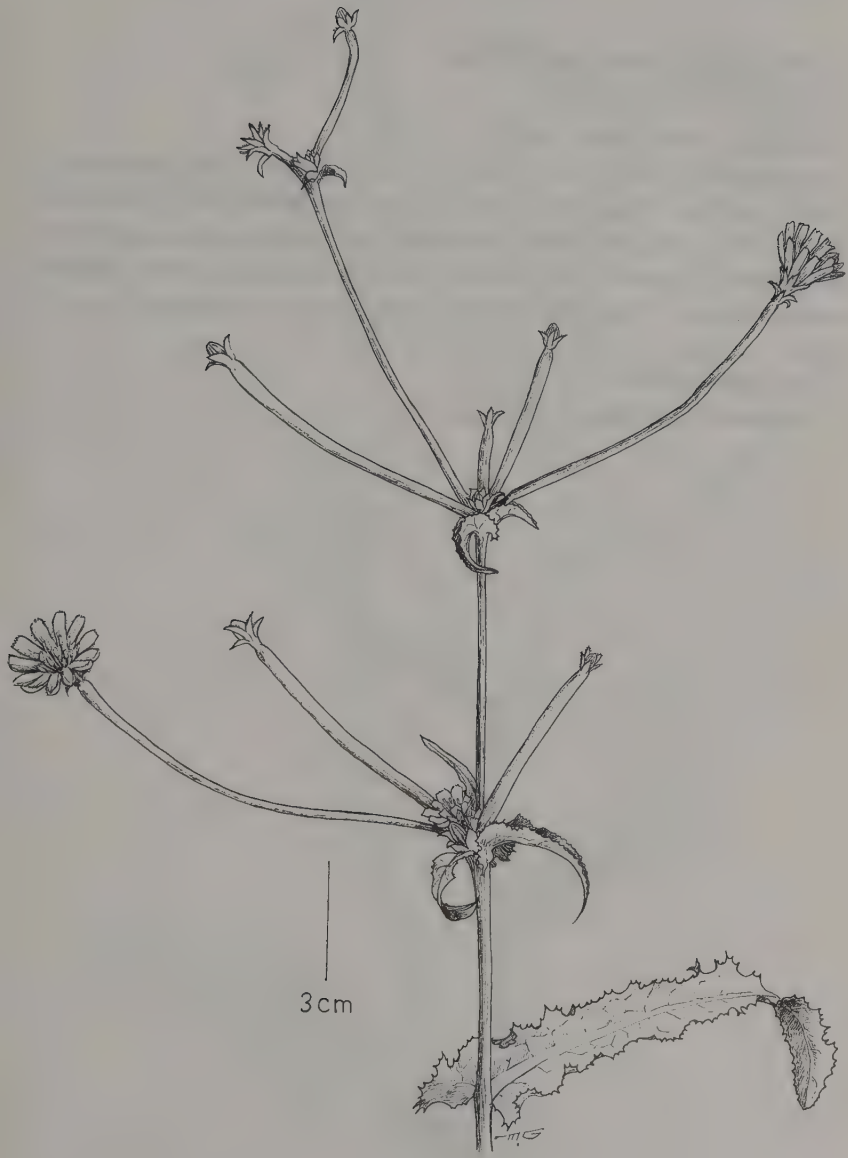
Cichorium is an old Arabic name for chicory, a salad vegetable; *endivia* = endive, another name for chicory plant; *pumilum* = dwarf or little.

Annual herb; stems usually dwarf, branching; basal leaves up to 35 cm, short-petioled; upper sessile, short, margins irregularly dentate; heads in sessile clusters along the stem or solitary on the top of thick swollen peduncles; flowers blue, ligulate; achenes irregularly angled, pappus of short scales.

Fields, roadsides.

Mediterranean, southern Europe, western Asia.

The green leaves are eaten as a salad. The root is used as a substitute for coffee or added to it to produce a special flavor.


3cm

Conyza aegyptiaca (L.) Dryand. in Ait., Hort. Kew., ed.1, 3, 254 (1789).

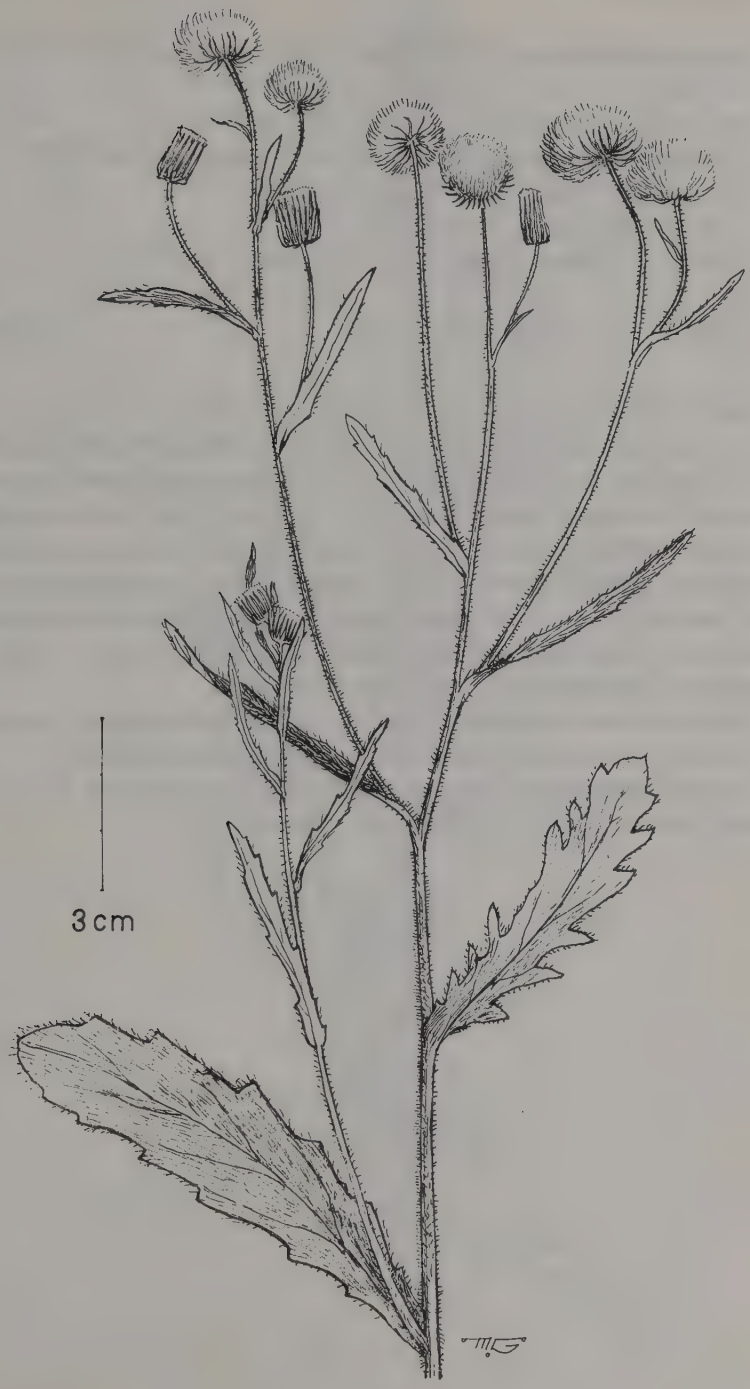
نَشَاش الدبان *nashshāsh al-dibbān*

Aegyptiaca = of Egyptian origin.

Annual herb, 20–60 cm, densely villous; stems much branching; leaves sessile, oblong-spathulate, clasping at the base, margins deeply serrate; heads long-peduncled, crowded at the end of branches, yellow or pale yellow, globose after anthesis; involucral bracts narrow, almost equal in length, in one row (not imbricated); achenes pubescent, pappus white.

Nile and canal banks.

Tropical and subtropical Africa and Asia.


3 cm

Conyza bonariensis (L.) Cronquist, Bull. Torr. Bot. Club, 70:632 (1943).

Syns. *Erigeron bonariense* L., Sp. Pl., ed.1, 863 (1753).
E. crispus Pourr., Hist. Mém. Acad. Sci. Toulouse, 3:318 (1788).
E. linifolius Willd., Sp. Pl. 3:1955 (1803).
Conyza ambigua DC., Prodr. 5:381 (1836).
C. linifolia (Willd.) Täckh., Stud. Fl. Egypt, 53 (1956).

حَشيشة الجبل *ḥashīshat al-gabal* Fleabane

Bonariensis from Bonaria in Buenos Aires, Argentina.

Annual herb, 20–80 cm; stems at first unbranched with terminal panicle of capitula (as in the illustration), later branching with branches overtopping the original inflorescence, to 1.2 m, densely hairy with a mixture of stiff spreading hairs and softer adpressed hairs; leaves alternate, linear-lanceolate, entire or coarsely serrate, heads numerous, densely clustered at the ends of branches; flowers cream or pale yellow, involucre hirsute; achenes 1.5 mm, oblong-elliptic, flattened, pubescent; pappus sessile, about twice as long as the achene, yellowish brown.

Roadsides and neglected land both in dry and moist habitats, varying accordingly in size and vigor; naturalized from tropical America.

Tropical America; widely naturalized in the Mediterranean, Asia, and many subtropical and warm regions of the world.

3 cm

Cotula anthemoides L., Sp. Pl., ed.1, 891 (1753).

Cotula from the Greek *kotyle* = cup, probably to describe the cuplike heads of the plant; *anthemoides* = similar in habit to *Anthemis*, another genus of Compositae.

Annual, 10–20 cm; stems spreading or prostrate, branching at the base; leaves pinnatilobed, lobes dentate, apiculate; heads on filiform peduncles; involucral scales glabrous, green in the middle, scarious-margined; flowers yellow, achenes narrowly winged, pappus absent.

Canal banks, moist ground.

Tropical and southern Africa, western Asia.

3 cm

Eclipta alba (L.) Hassk., Pl. Jav. Rar., 528 (1848).
Syns. *Verbesina alba* L., Sp. Pl., ed.1, 902 (1753).
Eclipta prostrata (L.) L., Mant. Alt., 286 (1771).

سَعدة ، سُوَيد *saᶜda, suwwēd* False daisy

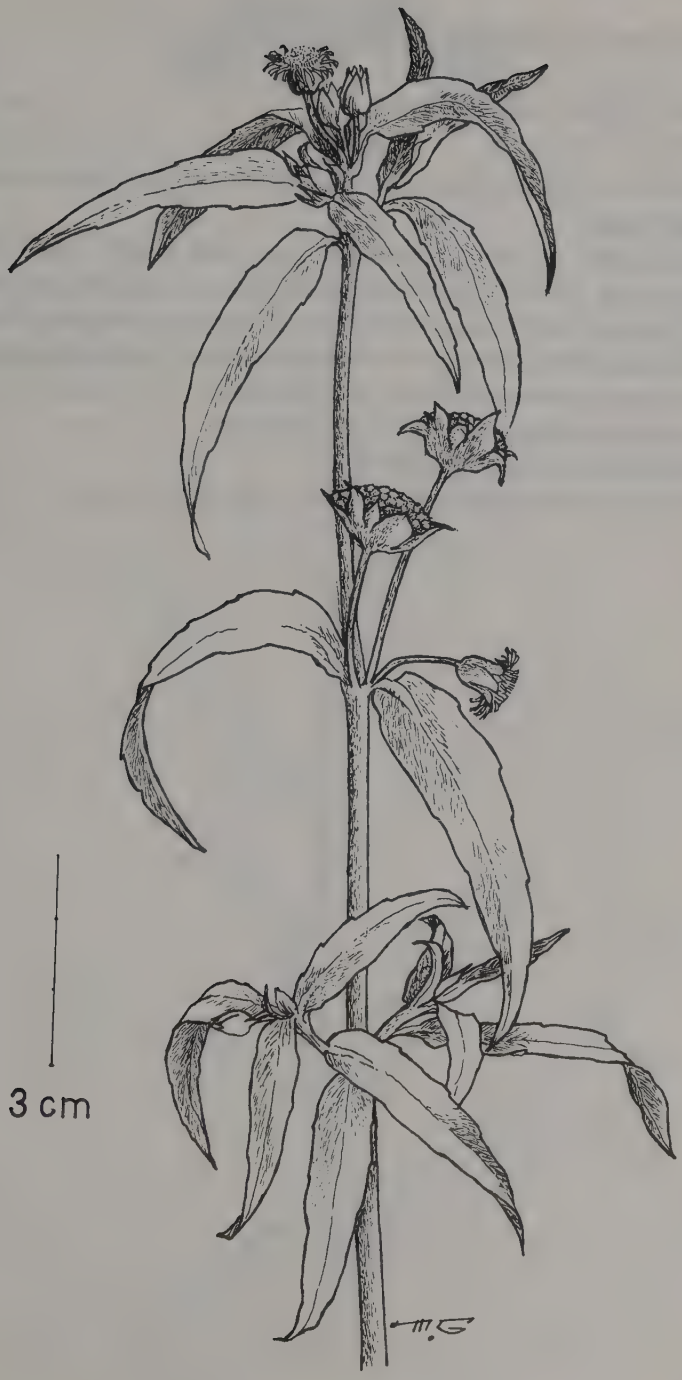
Alba = white, allusion to the white flowers.

Erect or decumbent scabrous herb, appressed hairy; stems branching from the base; leaves opposite, green, turning black on drying, oblong-lanceolate, denticulate or distantly serrate, tapering at both ends; peduncles axillary, 1–5 cm long; heads cylindrical, becoming hemispherical after anthesis; involucral bracts acute, as long as or slightly longer than the white flowers; achenes tuberculate, dentate at the apex, pappus absent.

Canal banks, moist ground; naturalized.

Tropical and warm temperate America; naturalized in the Old World.

The juice of the fresh plant is applied to the scalp to promote hair growth. If taken internally it blackens the hair and beard.


3 cm

COMPOSITAE

Gnaphalium luteo-album L., Sp. Pl., ed.1, 851 (1753).

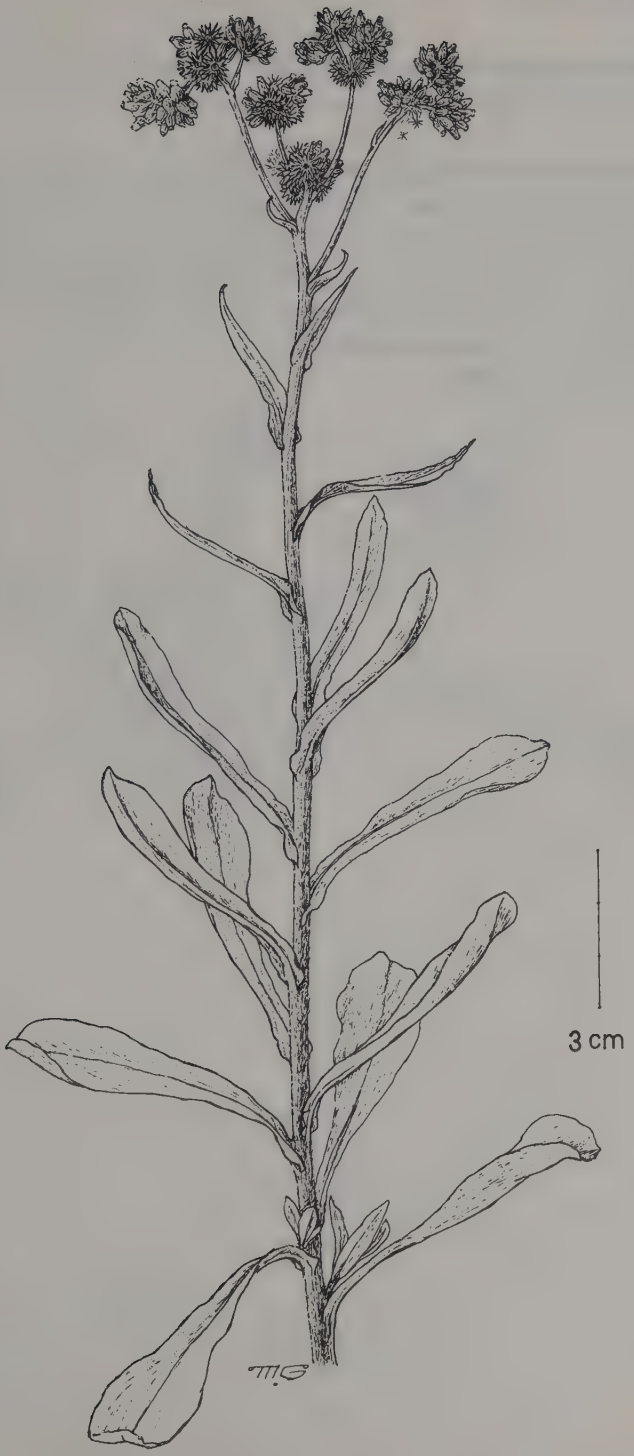
صابونة العَفريت *sabūnat al-ᶜafrīt* Cudweed

Gnaphalium = woolly, describing the habit of the plant; *luteo-album* = yellowish white.

Annual herb, 10–50 cm, densely covered with woolly white hairs; stems erect or ascending, usually branching above; leaves sessile, clasping at the base, lower leaves narrowly spathulate, upper oblong-linear; flower heads white yellowish, in corymbose, dense leafless cluster; peduncles densely white-tomentose, short; involucral bracts numerous, scarious, glabrous; achenes oblong, finely tuberculate.

Nile and canal banks, moist ground.

Widespread in temperate to subtropical regions of the world.


3 cm

Gnaphalium pulvinatum Delile, Descr. Egypte, Hist. Nat. 266, t.44, f.1, (1814).

Pulvinatum = cushion-shaped, probably describing the habit of the plant.

Annual herb, 5–15 cm, woolly-tomentose; stems prostrate, richly branching; leaves spathulate, attenuate at the base into a short petiole, apex mucronate; flower heads crowded in subglobose leafy terminal clusters, flowers white, involucre red-tipped, achenes almost glabrous.

Nile and canal banks, moist ground.

Egypt, Sudan, Arabia.

3 cm

Lactuca serriola L., Cent. Pl., 2, 29 (1756).
Syn. *L. scariola* L., Sp. Pl., ed.2, 1119 (1763).

خَس البقر *khass al-baqar* Oil lettuce, Prickly lettuce

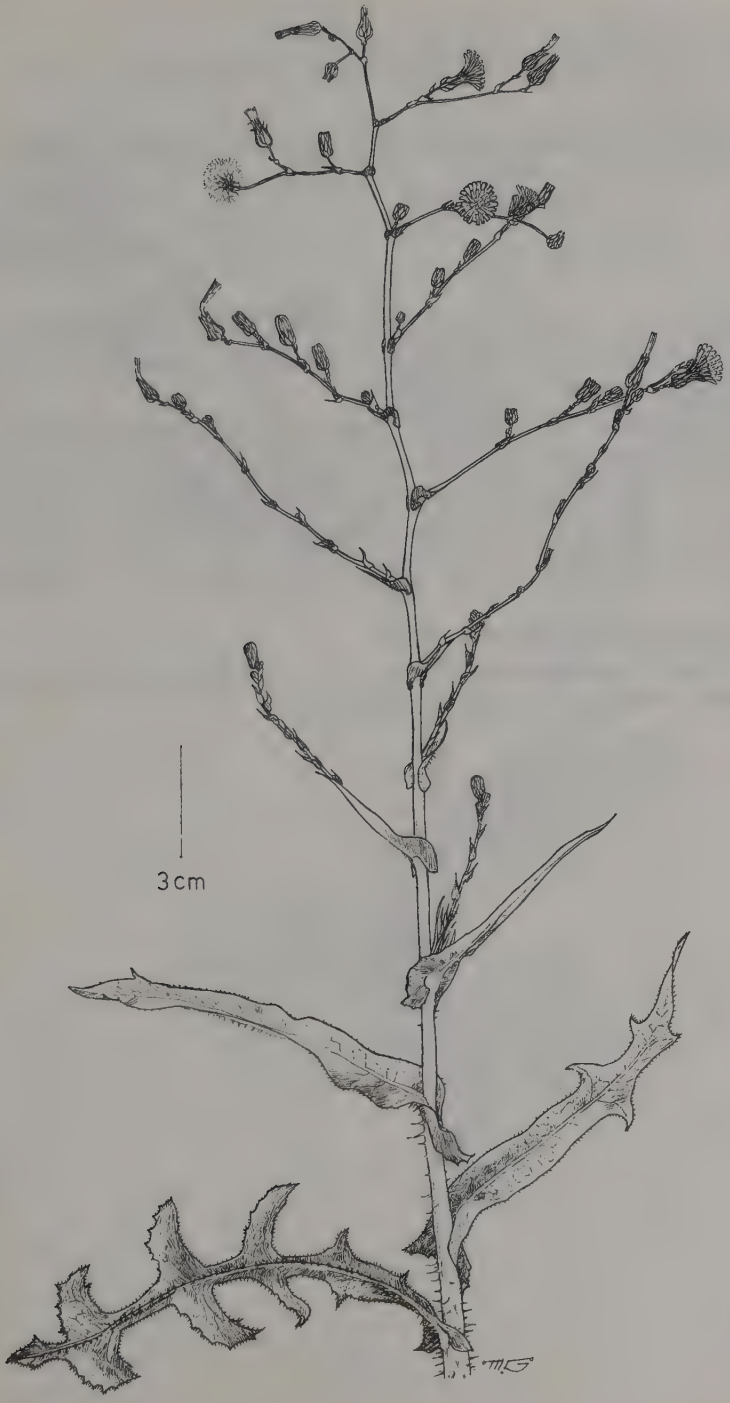
Lactuca from Greek *lac* = milk, describing the milky sap of the plant.

Annual or biennial herb, 30–80 cm, sometimes to 2 m, glabrous; stems erect, yellowish, leafy, ending in a long open panicle; leaves sessile, rigid, auriculate, clasping, spinulose on the midrib and along the margins, lower leaves pinnatisect, upper pinnatifid or undivided; heads narrow, few-flowered, in long pyramidal panicles; flowers ligulate, yellow; achenes gray to blackish, elliptical, ribbed, beaked, pappus of simple hairs.

Roadsides, waste ground.

Mediterranean, Europe, Asia.

Seeds of this species as well as of **Lactuca sativa**, the salad plant, yield the edible lettuce oil. In folk medicine the plant is used as an antipoison for scorpion and snake bites, acting by hypotonic effect of the sap.


3cm

Matricaria recutita L., Sp. Pl. 891 (1753).

Syns. *M. chamomilla* L., Fl. Suec. ed.2, 296 (1755) non L., Sp. Pl., 891 (1753).

Chamomilla recutita (L.) Rauschert, Folia Geobot. Phytotax. (Praha) 9:255 (1974).

بابونج *bābūnig* Wild chamomile

Matricaria is a Medieval word possibly from Latin *matrix* = womb, because of its use in infections of the uterus; *recutita* = denuded of skin or appearing as if its skin was taken away.

Annual aromatic herb, 10–50 cm; stems richly branching above; leaves alternate, bipinnatisect, segments acute; heads large, peduncled, involucral scales with pale margins, ray flowers white, disc flowers yellow; achenes 1 mm long, grayish brown, 4–5-ribbed, pappus small or absent.

Fields, waste ground; naturalized and often cultivated as a medicinal herb.

Mediterranean, Europe, western Asia.

The plant is used in cosmetics. It is also a medicinal herb used as a stomachic, febrifuge, bronchitis treatment, etc.

3 cm

Pluchea dioscoridis (L.) DC., Prodr. 5:450 (1836).
Syns. *Baccharis dioscoridis* L., Cent. Pl. 1, 27 (1755).
Conyza dioscoridis (L.) Desf., Tabl. École Bot. ed.2, 114 (1815).
Baccharis aegyptiaca Forsskål ex DC., Prodr. 5:450 (1836).

بَرنوف *barnūf* Ploughman's spikenard

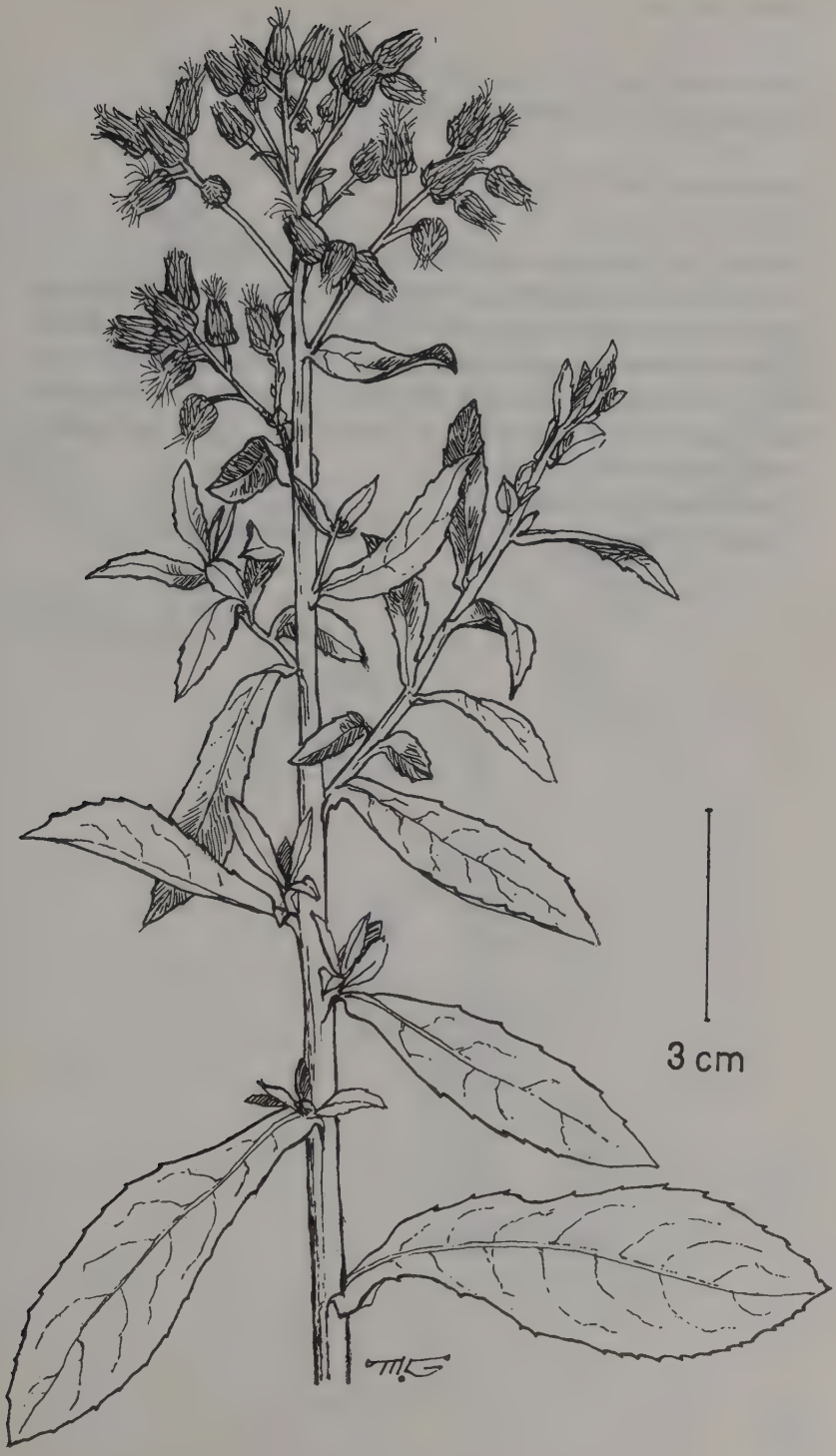
This species is named in honor of the first century Greek physician and herbalist Dioscorides.

Aromatic shrub, to 3 m, glandular, hairy; stems richly branching; branches leafy, ending in dense corymbose inflorescences of numerous heads; leaves sessile with auriculate base, elliptic to oblong-lanceolate, serrate; heads numerous; involucre 3.5–5 mm, involucral bracts acute, outer bracts hairy, shorter than the pappus; flowers pinkish, achene shorter than the pappus.

Nile and canal banks, moist and waste ground.

Eastern and southern Africa, western Asia.

The plant is used in popular medicine for rheumatic pains.


3 cm

COMPOSITAE

Pulicaria arabica (L.) Cass., Dict. Sci. Nat. 44:94 (1826).
Syn. *Inula arabica* L., Mant. 114 (1767).

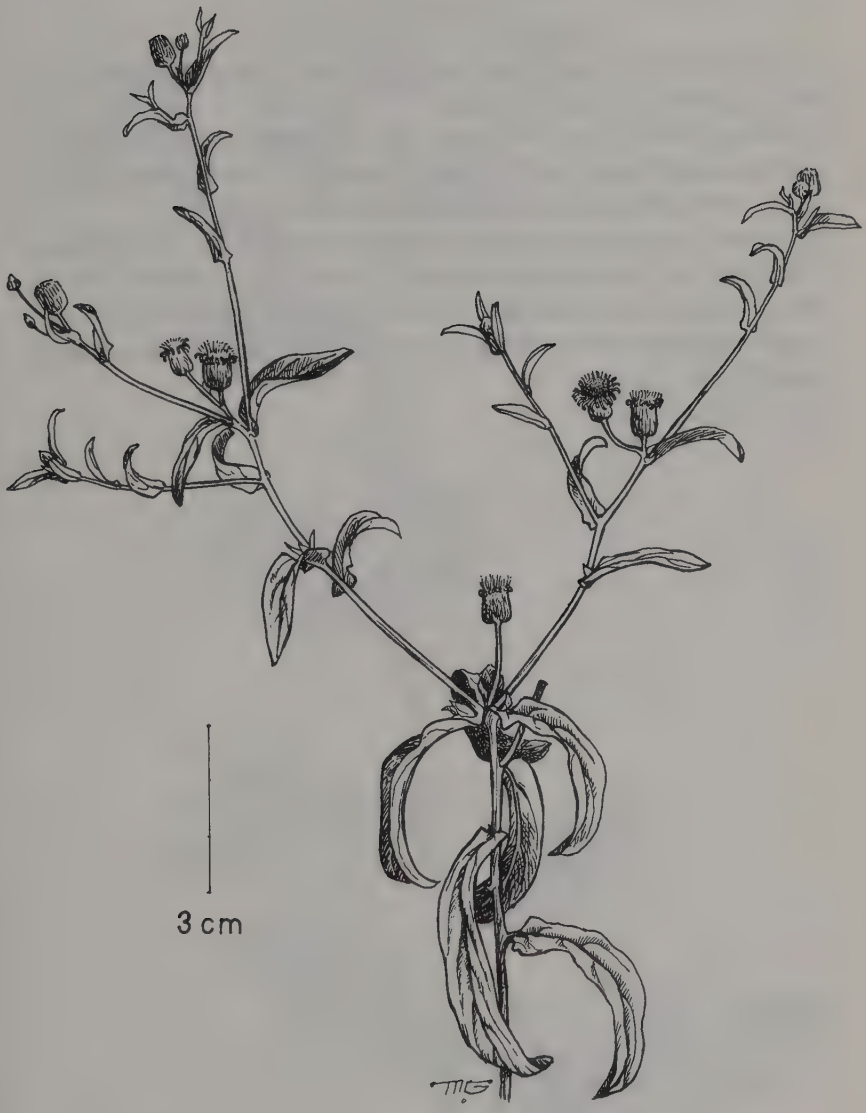
أبو عين صفرة *abu ᶜayn ṣafra*

Pulicaria from Latin *pulex* = flea; *arabica* = of Arabian origin.

Annual stiff herb, 30–80 cm, almost glabrous; stems erect, branching near the base; branches straw-colored, glossy; leaves soft, linear-lanceolate, entire; heads short-peduncled, solitary or 2–3 together; involucral bracts linear, villose; outer bracts herbaceous; ray flowers a bit longer than disc flowers, all yellow, pappus formed of an outer short scarious cup and an inner tuft of fragile hairs.

Canal banks, moist ground.

Eastern Mediterranean to Afghanistan.


3 cm

COMPOSITAE

Senecio aegyptius L., Sp. Pl., ed.1, 867 (1753).

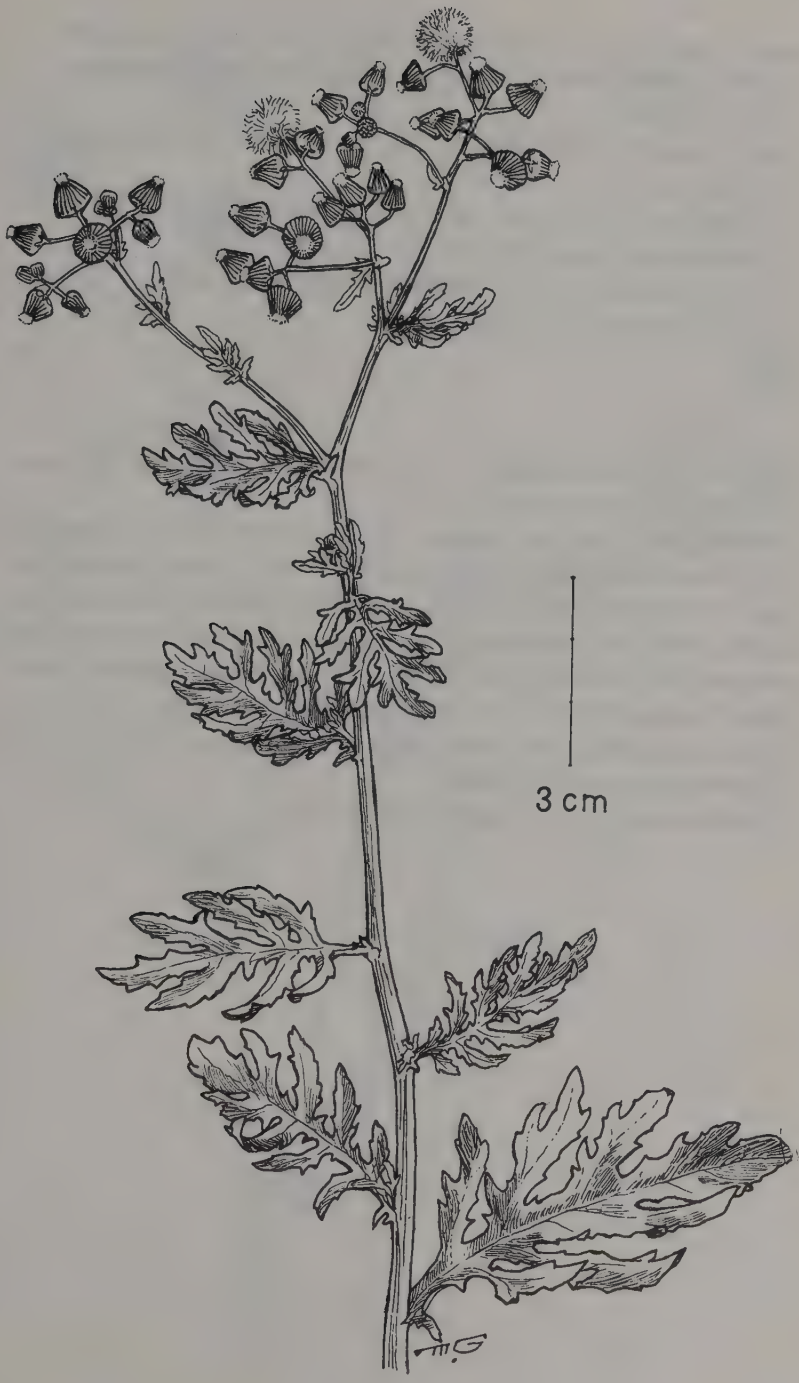
بيسوم *baysūm*

Senecio from Latin *senex* = old man, describing the hoary pappus of the seed; *aegyptius* = of Egyptian origin.

Annual glabrous herb, 15–30 cm; stems branching; leaves pinnatisect, lobes irregularly serrate; inflorescence terminal, corymbose; heads small, conical after anthesis; flowers yellow, ray flowers short.

Until the 1960s the plant was of common occurrence on the silty banks of the Nile and main irrigation canals. Since the construction of the Aswan High Dam, less silt has been deposited and the species has become increasingly less common, except in the southern governorates of Upper Egypt.

Endemic to Egypt.


3 cm

Senecio glaucus L., Sp. Pl., ed.1, 868 (1753). subsp. **coronopifolius** (Maire) Alexander, in Notes Roy. Bot. Gard. Edinburgh 37:412 (1979).

Syns. *S. coronopifolius* Desf., Fl. Atl. 2:273 (1799), non Burm. fil. (1768).

S. laxiflorus Viv., Fl. Lib. Spec. 55, t.11, f.3 (1824).

S. desfontainei Druce, Brit. Pl. List, ed.2, 61 (1928).

S. gallicus Vill. subsp. *coronopifolius* Maire, in Jahandiez & Maire, Cat. Fl. Maroc 3:784 (1934).

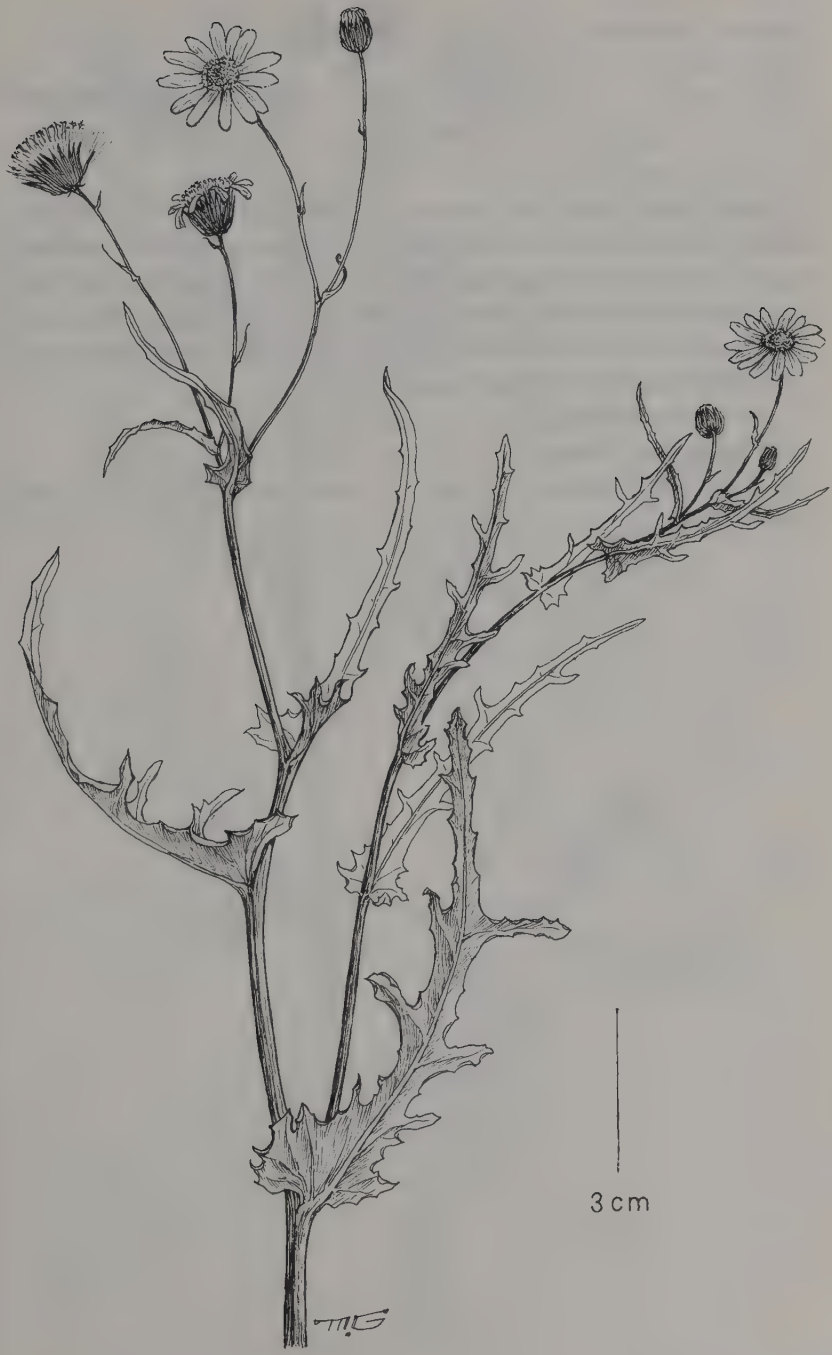
قُرَّيص *qurrēṣ*

Glaucus = gray blue; *coronopifolius* = with leaves like those of *Coronopus*, a genus of Cruciferae.

Annual herb, 10–40 cm, glabrous to slightly floccose, stems branching at the base; leaves rather fleshy, pinnatisect, lobes narrow, margins revolute; inflorescence few-headed, corymb-like; heads honey-scented, ray flowers yellow and conspicuous; involucral bracts linear, acuminate, scarious-margined; achenes about 2 mm long, cylindrical-fusiform, ribbed, minutely strigose; pappus 5–6 mm long, white, deciduous.

Fields, roadsides, canal banks; often forming attractive yellow carpets if growing in dense, pure stands.

Mediterranean, Sahara, Europe, western Asia.


3 cm

COMPOSITAE

Senecio vulgaris L., Sp. Pl., ed.1, 867 (1753).

مُرَّار *murrār* Common groundsel

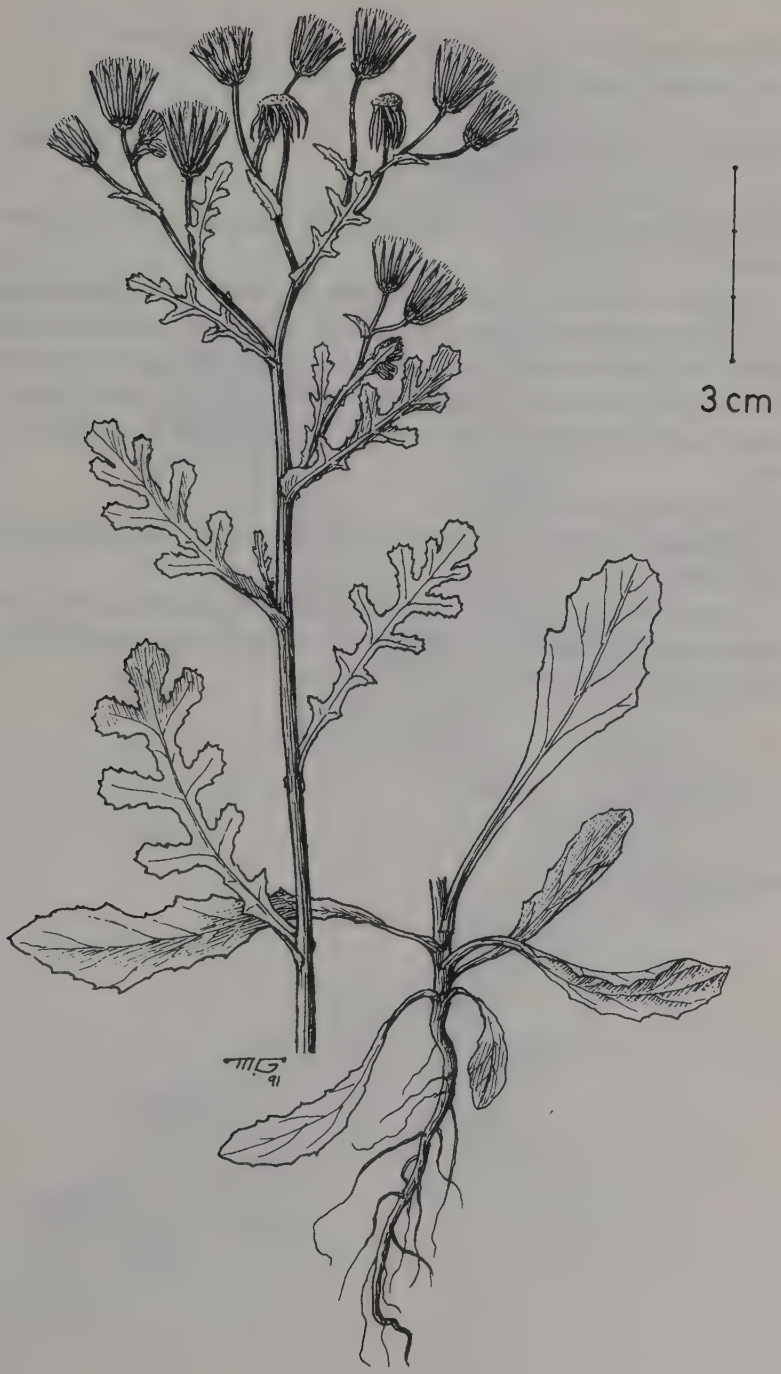
Vulgaris = common.

Annual herb, 10–30 cm, glabrous or slightly hairy at the leaf base, stems branching, erect or ascending; lower leaves spathulate, petioled; upper leaves sessile, clasping, auriculate; heads numerous, in dense corymbose inflorescences, ligulate flowers short or absent; involucre 6–7 mm, involucral bracts scarious-margined with black hairy tips; achene 2.5–3 mm; pappus longer than the achene.

Nile and canal banks, fields.

Mediterranean, Europe, western Asia.

The flowering branches are used as a vasoconstrictor, vermifuge, and mild laxative.


3 cm

Silybum marianum (L.) Gaertn., De Fruct. et Sem., 2:378 (1791).
Syn. *Carduus marianus* L., Sp. Pl., ed.1, 823 (1753).

شوك الجمل *shūk al-gamal* St. Mary's thistle

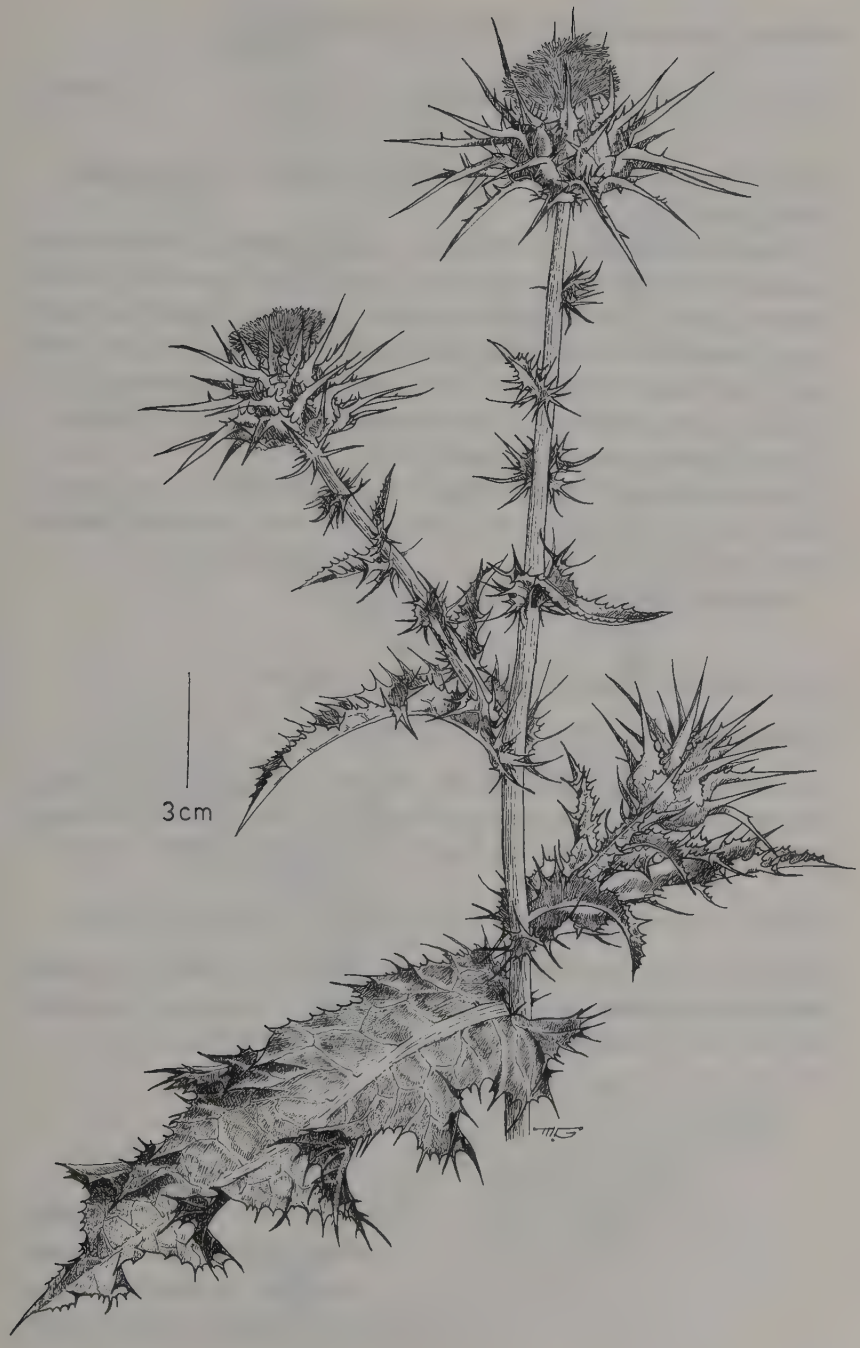
Silybum from Greek *silybon* = thistle plant; *marianum* = St. Mary the Virgin.

Annual stout herb, to 2 m, almost glabrous; stems striate, branching; leaves with spiny margins and characteristic white veins and spots; basal leaves very large, petiolate, forming rosettes, pinnatifid; upper leaves sessile, clasping, auriculate; heads large, involucral bracts broad, spiny; flowers purple or white, achene 5–6 mm, slightly striate, pappus yellowish.

Canal banks, moist ground.

Mediterranean, Europe, western Asia; introduced and naturalized into South America.

Young shoots are eaten as a raw salad (Feinbrun-Dothan 1978). The plant is grazed by camels and donkeys and used in folk medicine for liver disorders, gallstones, coughs, and bronchitis.


3cm

Sonchus oleraceus L., Sp. Pl., ed.1, 794 (1753).

جُعضيض ، جَلاوين *guᶜḍēḍ, galāwēn* Sow-thistle

Sonchus from Greek *sonchos* = hollow, describing the stem; *oleraceus* = edible garden herb.

Annual or biennial herb, 10–80 cm, usually glabrous, sometimes the upper part of the plant glandular hairy; stems hollow, branching; leaves glabrous, lower leaves undivided with narrowly winged petiole; the upper larger, pinnatisect or lyrate, base auriculate; flowers ligulate, yellow; achenes 3 mm long, compressed, rugose, not winged; pappus mainly of white persistent cottony hairs and few deciduous bristles, to 7 mm long.

Fields, gardens, roadsides, waste ground.

Cosmopolitan weed, less abundant in the tropics than in cool and temperate regions; originally native to the Old World, introduced into the New World.

Fresh plants are eaten as a salad.

The following 2 species are frequent in Lower Egypt:

Sonchus asper (L.) Hill, Herb. Brit. 1:47 (1769).

Annual, leaves with sharply dentate margins; achenes 2–3.5 mm long, flat, winged, with 3 longitudinal ribs on each side. Fields and waste ground. Widespread in the Old World, introduced into the New World.

Sonchus macrocarpus Boulos & C. Jeffrey, Taxon 18:349 (1969).

Biennial or perennial, leaves with recurved lobes; achenes 4–4.5 mm long (hence the name *macrocarpus* = large fruit, if compared with other species), almost rectangular, with broad margins. Endemic to Egypt.

The entire plant: **Sonchus oleraceus**
a. achene of **Sonchus oleraceus**
b. achene of **Sonchus asper**
c. achene of **Sonchus macrocarpus**

a
b
c
3 cm

COMPOSITAE

Urospermum picroides (L.) F.W. Schmidt, Samml. Phys-oekon. Aufsätz, 1:275 (1795).

Syn. *Tragopogon picroides* L., Sp. Pl., ed.1, 790 (1753).

سَليس *salīs*

Urospermum from Greek *oura* = tail, and *sperma* = seed, describing the achenes (seeds) which possess a tail-like beak; *picroides* = resembling *Picris*, another genus of Compositae.

Annual herb, 15–60 cm; stems spinulose; lower leaves petiolate, pinnatifid or dentate; upper leaves pinnatisect or lyrate, auriculate; involucral scales 8, in one row, connate at the base; flowers yellow, all ligulate; achenes beaked, beak longer than the body of the achene; pappus of white plumose hairs, about 10 mm, deciduous.

Fields, gardens, roadsides, waste ground.

Mediterranean, southern Europe, western Asia.

3 cm

Xanthium spinosum L., Sp. Pl., ed.1, 987 (1753).

شُبيط *shubēṭ*

Spinosum = with spines.

Annual herb, 30–80 cm; stems richly branching, with a 2–3-fid yellow spine in the leaf axil; leaves short-petioled or sessile, 3-fid, lower surface whitish, upper green; male heads terminal, female axillary; fruiting involucre nodding, ellipsoid, 8–10 mm, pubescent; fruit ellipsoid, with hooked prickles, beakless or with a single beak.

Roadsides, fields, moist ground; naturalized.

Native of South America; introduced into many regions of the Old World.

3 cm

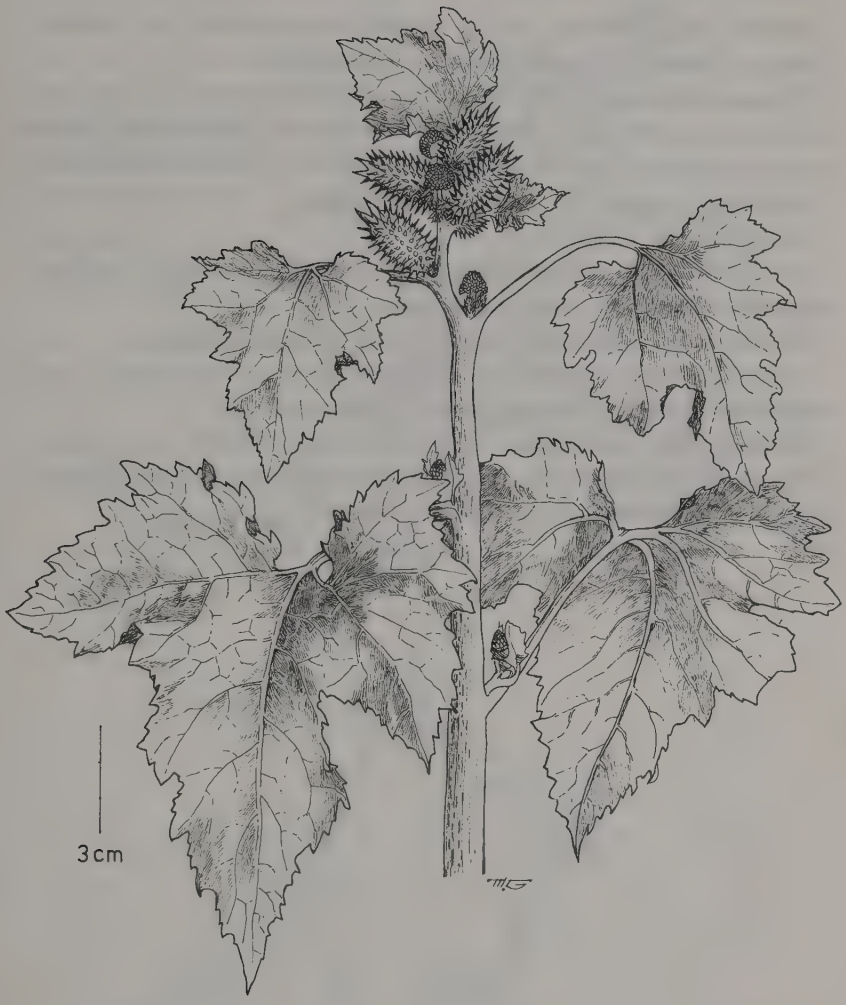
Xanthium strumarium L., Sp. Pl., ed.1, 987 (1753).
Syn. *X. brasilicum* Velloso, Fl. Flum. Icones, 10, t.23 (1825).

شَبْكة *shabka*

Strumarium = with cushionlike or goiterlike swellings, an allusion to the shape of the fruit.

Annual herb, 30–80 cm; stems branching, spineless; leaves unarmed, broadly triangular or 3-lobed, long-petioled, margins irregularly serrate; male (above) and female (below) flowers in separate heads, female heads 2-flowered, developing into a spiny fruit with 2 beaks.

Fields, Nile and canal banks, moist ground; naturalized in many regions of the Old World.


3cm

Convolvulus arvensis L., Sp. Pl., ed.1, 153 (1753).

عُلّيق *ʿullēq* Lesser bindweed

Convolvulus = entwine, alluding to the twining habit of the plant; *arvensis* = growing in or pertaing to cultivated fields.

Perennial twining glabrous herb, with rhizomes penetrating deeply into the soil; leaves hastate to linear, entire; peduncles 1–3-flowered, sepals scarious-margined, corolla white or pinkish, style 1, capsule subglobose, 2–4-seeded; seeds 3–3.5 mm long, angular, brownish, minutely scabrous.

One of the most widespread and persistent weeds in fields, gardens, roadsides, hedges, orchards, waste ground, etc.

Cosmopolitan, especially in subtropical to temperate regions.

In folk medicine the plant is used as a febrifuge and is one of the best purgatives. The leaves are used externally as a vulnerary.

Convolvulus althaeoides L., Sp. Pl., ed.1, 156 (1753) is another widespread weed within the coastal Mediterranean region in barley fields, olive and fig orchards, and along the roadsides.

3cm

Cuscuta pedicellata Ledeb., Fl. Altaica 1:293 (1829).
Syn. *C. arabica* Fresen., Mus. Senckenb. 1:165 (1834).

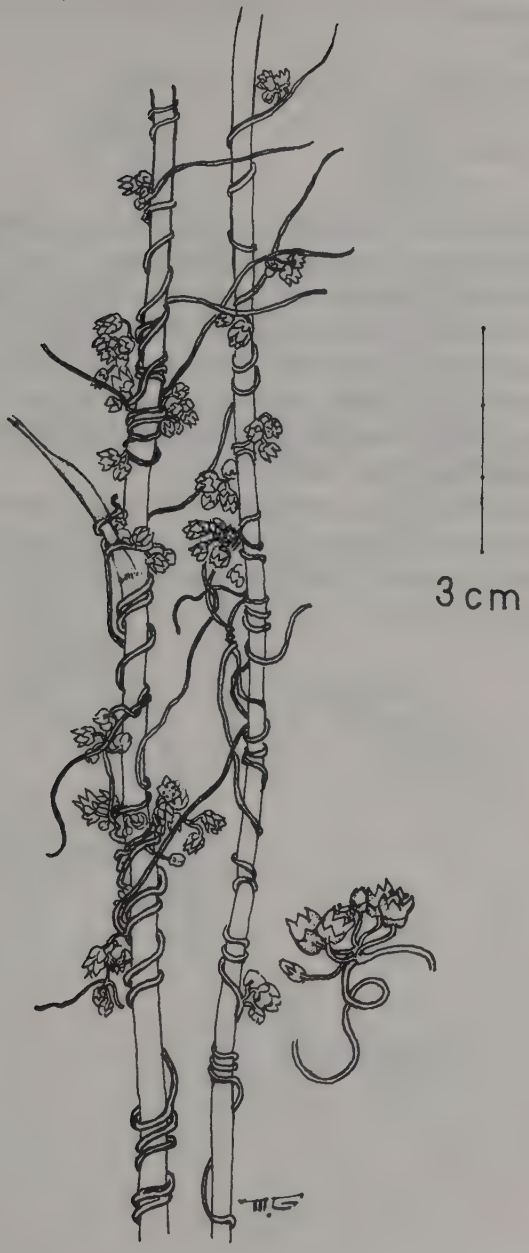
حامول *ḥāmūl* Clover dodder

Cuscuta is a Medieval Latin name for dodder; *pedicellata* = with a flower stalk.

Annual leafless parasite; stems filiform, delicate, twining on different host plants and adhering to them by haustoria; leaves minute, scale-like; inflorescence umbel-like, 4–8-flowered; flowers white, pedicelled, 4-parted, sepals not overlapping; petals triangular-ovate, acute; capsule globose.

Fields, roadsides; a well-known parasite on clover, **Trifolium alexandrinum** (berseem), and on other spontaneous plants, e.g. **Alhagi graecorum**.

Mediterranean, Europe, western Asia.


3 cm

Brassica nigra (L.) Koch in Röhling, Deutsch. Fl., ed.3, 4:713 (1833).

Syn. *Sinapis nigra* L., Sp. Pl., ed.1, 668 (1753).

لِسبان *lisbān* Black mustard

Brassica from *bresic*, the Celtic word for cabbage, another species of this genus; *nigra* = black, allusion to its black seeds.

Erect annual or biennial herb, 0.5–1.5 m; stems erect, richly branching above; lower leaves petiolate, up to 40 cm long, lyrate-pinnatisect; upper leaves short-petioled, few-lobed; inflorescence racemose, terminal and lateral; flowers bright yellow, fragrant; sepals 5 mm, petals 10 mm; siliqua adpressed to rachis, 4-angled, stigma capitate; seeds black or dark brown.

A characteristic winter weed in fields.

Mediterranean, Europe; also naturalized in many regions of the world.

The plant is often used as a cut green in flower shops. Mustard is produced from the seeds. In folk medicine the plant is used as a stomachic, diuretic, and stimulant.

3cm

Brassica tournefortii Gouan, Illustr. Observat. Bot. 44, t.20A (1773).

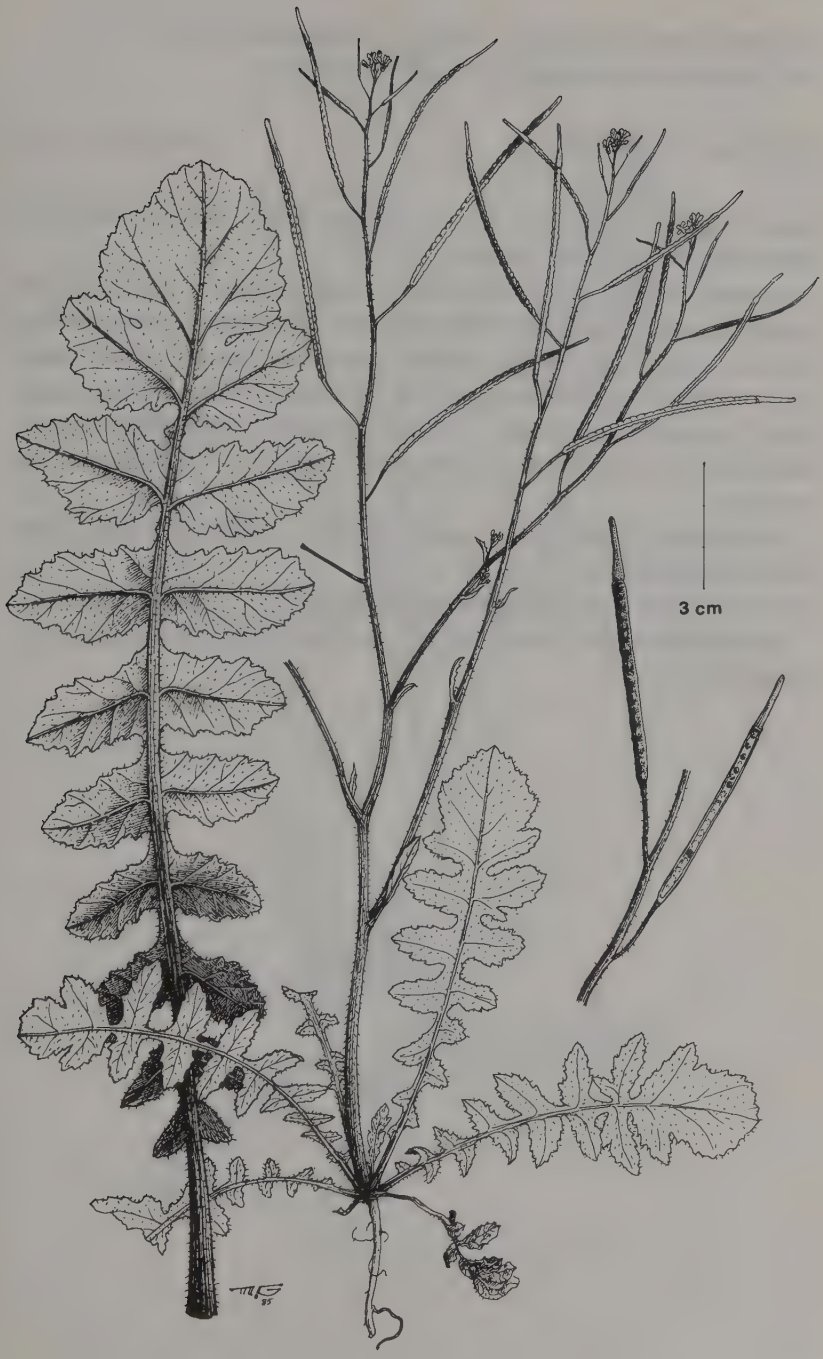
شلطام *shilṭām*

Tournefortii in honor of the French naturalist Tournefort (1656–1708).

Annual herb, 20–80(–120) cm, densely hispid below, slightly hispid or glabrescent above, of vigorous growth in irrigated fields, also grows as a desert ephemeral; basal leaves lyrate, large, in a rosette; upper leaves sessile, small; inflorescences terminal and lateral, paniculate, lax; flowers yellowish; pedicels ascending, 1–5 mm, much elongated and rigid in fruit; siliqua, 5–6 cm, linear, compressed, with a conspicuous beak; seeds purplish brown, almost globose, 1 mm diameter, rich in oil.

Sandy and loamy fields, gardens, orchards.

Mediterranean, western Asia.


3 cm

Capsella bursa-pastoris (L.) Medik., Pflanzengatt., 1:85 (1792).
Syn. *Thlaspi bursa-pastoris* L., Sp. Pl. 647 (1753).

كيس الراعي *kēs al-rāᶜi* Shepherd's purse

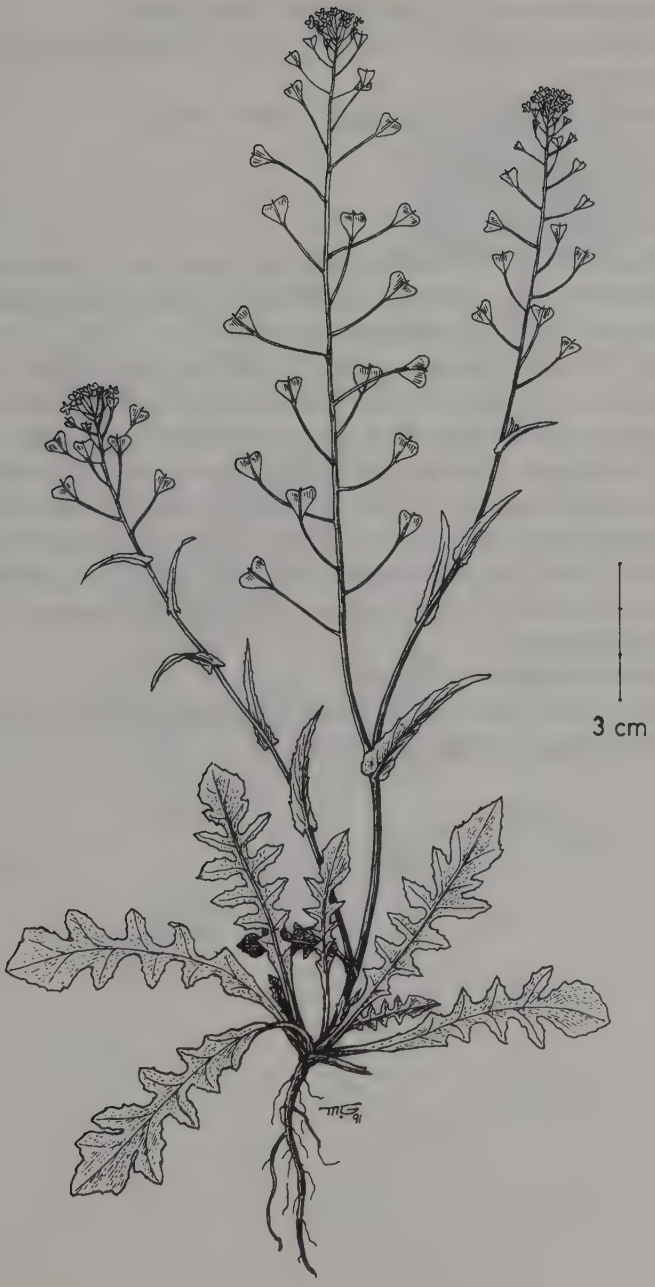
Capsella from Latin *capsa* = box, alluding to the shape of the fruit; *bursa-pastoris* = shepherd's purse.

Annual herb, 10–40 cm, glabrous or slightly hairy; stems erect or spreading, richly branching from the base; lower leaves form a rosette, petioled, lobed; upper leaves sessile, undivided, sagittate at the base; flowers white, small; petals longer than the sepals; fruiting racemes elongated; fruit purse-like silicule, 4–7 mm, obtriangular; valves keeled; style short but distinct in the broad apical notch; seeds 8–12 in each cell, not marginate.

A widespread winter weed, in gardens, fields, orchards, lawns, waste ground, roadsides, etc.

Cosmopolitan, especially in temperate regions.

The plant is used in folk medicine as an astringent, hemostatic, and vasoconstrictor.


3 cm

CRUCIFERAE

Coronopus didymus (L.) Sm., Fl. Brit. 2:691 (1804).
Syns. *Lepidium didymum* L., Syst. Nat., ed.12, 2:433 (1767) & Mant. Pl. 92 (1767).
Senebiera didyma (L.) Pers., Syn. Pl. 2:185 (1806).

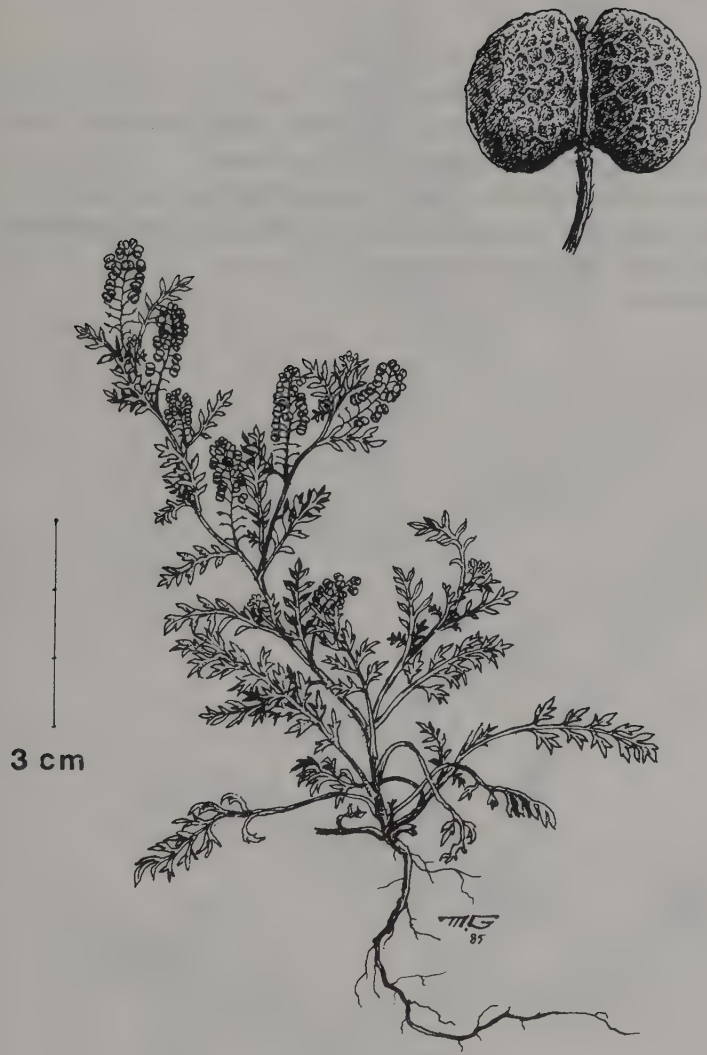
رَشاد البر *rashād al-barr*

Coronopus from Greek *korone* = crown, and *pous* = foot, describing the spreading habit of the plant and its radially branching stem; *didymus* = formed in pairs, allusion to the shape of the fruit.

Annual or biennial procumbent herb, 10–25 cm; stems hairy, richly branching; leaves pinnatisect with pinnatifid lobes; inflorescence short axillary raceme, often elongated in fruit; flowers minute, greenish; sepals 0.6–0.8 mm, elliptic, with scarious margins; petals narrow, shorter than the sepals, often reduced to rudimentary scales; stamens reduced to 2–4; ovary elliptic, stigma sessile; fruit small didymous indehisent silicule, 1.2–1.5x2–2.5 mm, deeply emarginate, with a narrow septum, reticulate-rugose, each half of the fruit is 1-seeded; seeds kidney-shaped, 1–1.5 mm, finely reticulate.

Fields, lawns, gardens, roadsides.

Origin uncertain, but probably South Amercian; naturalized in many temperate and tropical regions of the world.


3 cm

Coronopus niloticus (Delile) Spreng., Syst. Veg. 2:853 (1825).

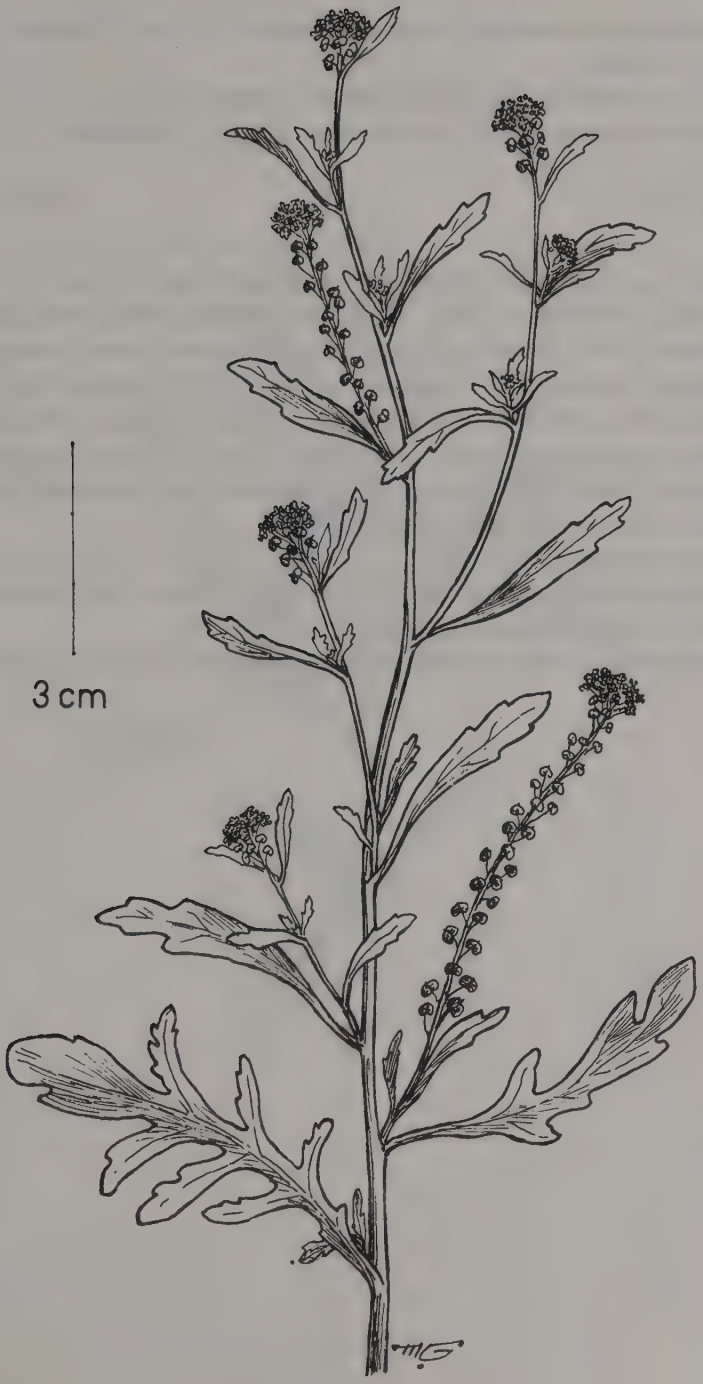
رَشاد *rashād*

Niloticus = from the banks of the river Nile.

Annual herb, 10–30 cm; glabrous or with minute hairs; stems richly branching; leaves dentate to pinnatifid; flowers small, pedicelled, petals white; fruit small, on a slender elongated inflorescence.

Confined to the silty Nile and canal banks. Since the construction of the Aswan High Dam, less silt has been deposited in its natural habitat and the species has become increasingly less common.

Eastern Africa.


3 cm

Coronopus squamatus (Forsskål) Aschers., Fl. Prov. Brandenb., 1:62 (1860).

Syns. *Lepidium squamatum* Forsskål, Fl. Aegypt.–Arab., 117 (1775).
Senebiera coronopus (L.) Poir. in Lam., Encycl. 7:76 (1806).

حرًى *ḥarra* Water cress

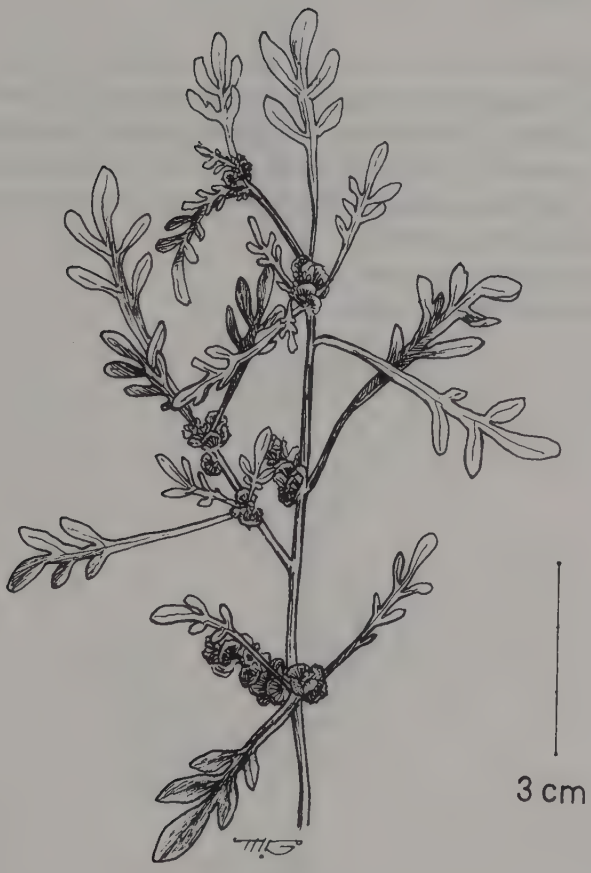
Squamatus = furnished with scales, describing the habit of the fruit.

Annual or biennial herb, 10–30 cm, glabrous, dark green; stems spreading, richly branching at the base, procumbent; lower leaves pinnatipartite with pinnatifid segments; upper leaves pinnatisect; inflorescence short axillary racemes, crowded in fruit, flowers 2 mm; petals white, twice as long as the sepals; fruits 3.5x5 mm, short-pedicelled, crowded, indehiscent, reniform, verrucose-tuberculate or strongly reticulate; seeds solitary in each cell, globular.

Moist ground, along canals.

Mediterranean, western and central Europe, western Asia; introduced into Australia, North and South America.

The leaves are eaten as green salad and the roots are cooked and eaten.


3 cm

Enarthrocarpus lyratus (Forsskål) DC., Regn. Veg. Syst. Nat. 2:661 (1821).

Syn. *Raphanus lyratus* Forsskål, Fl. Aegypt.–Arab. 119 (1775).

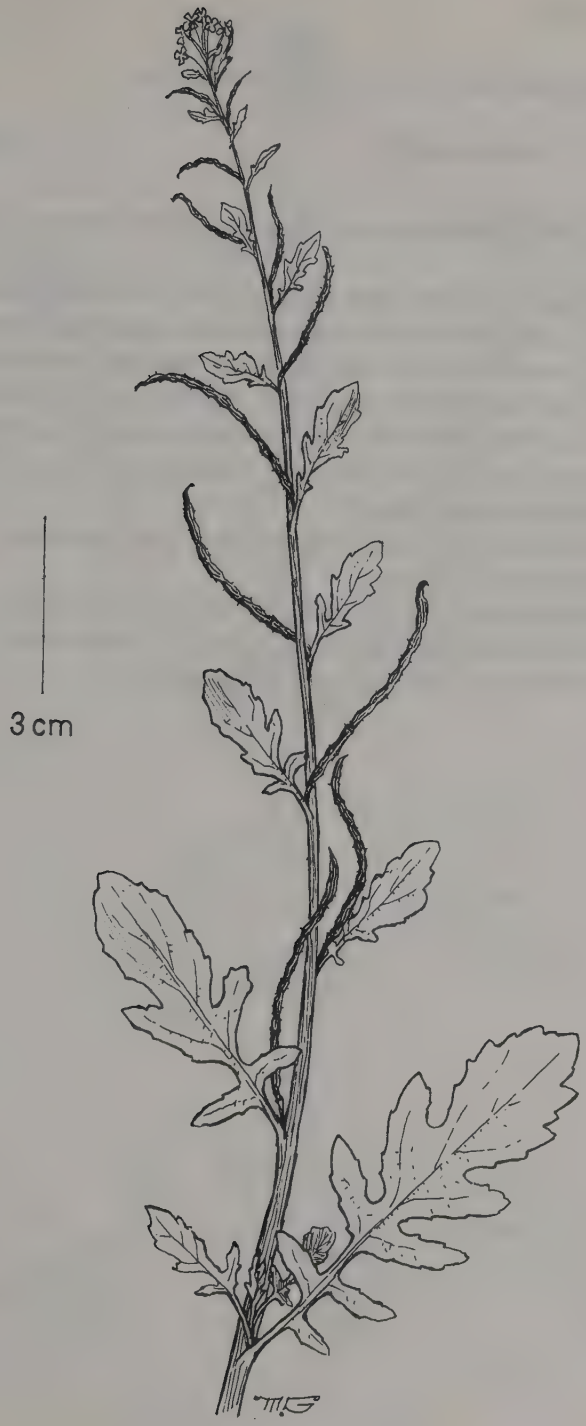
شِرطام *shirṭām*

Lyratus = lyre-shaped, describing the shape of the leaf.

Annual, sparingly hairy, hispid herb, 10–40 cm; stems ascending or erect, branching from the base; lower leaves lyrate, upper few-lobed, smaller; inflorescence bracteate; flowers 5–7 mm, petals yellow, purple at the base; fruit siliqua, slightly curved, flattened, 3–5 cm long, torulose, beaked; seeds reddish brown.

Edges of cultivations, waste ground.

Eastern Mediterranean, Arabia.


3 cm

Lepidium sativum L., Sp. Pl., ed.1, 644 (1753).

حَب الرشاد *ḥabb al-rashād* Garden cress

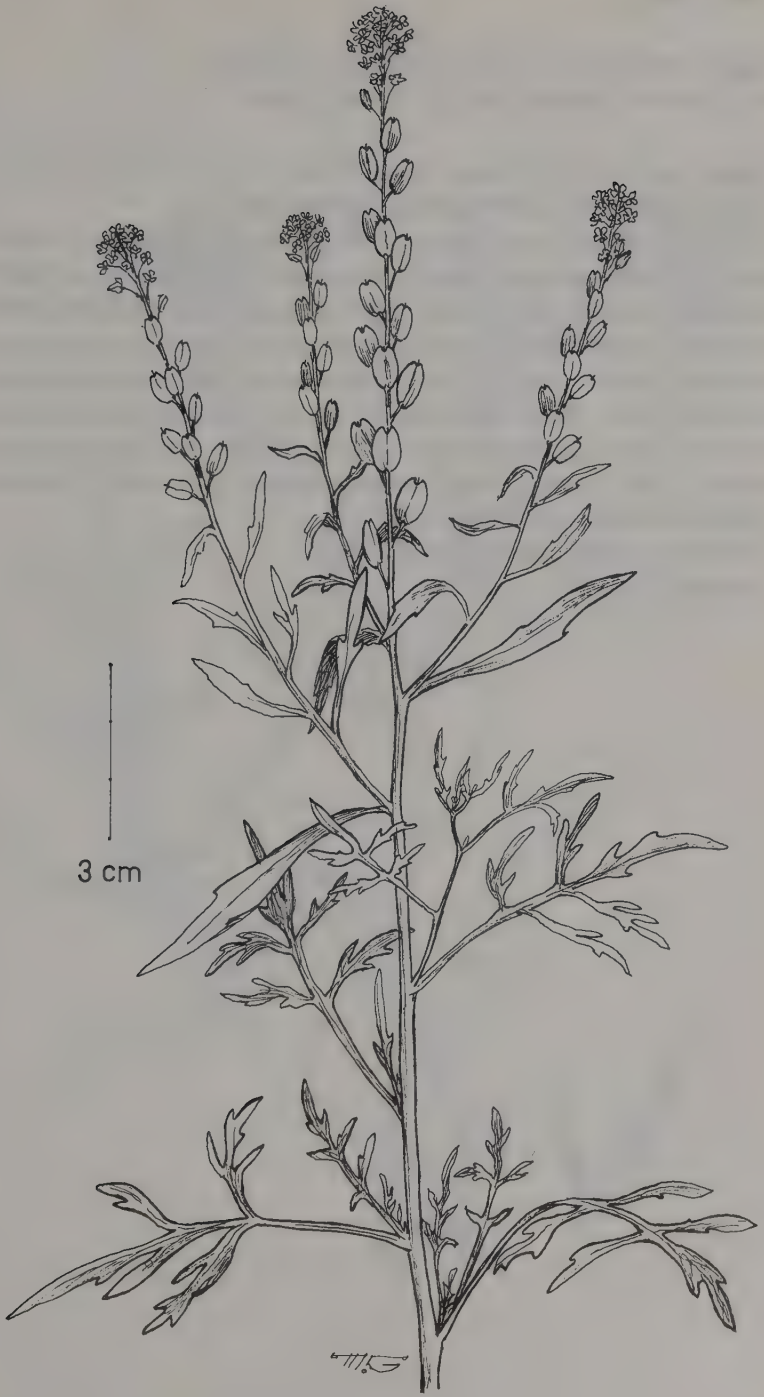
Lepidium = scale, alluding to the shape of the fruit; *sativum* = grown as a crop.

Annual herb, 15–60 cm, glabrous; stems erect, branching mainly in the upper parts; basal leaves bipinnatisect, petiolate; upper leaves pinnatisect, uppermost oblong-linear; inflorescence terminal and axillary racemes, elongated in fruit; flowers pedicelled, petals white or pinkish; fruit silicule, 5x3.5 mm, broadly-elliptic, flattened, apex notched, with a short persistent style, margins winged; seeds reddish brown, ovoid, 2x1 mm.

Fields, roadsides; naturalized.

Eastern Mediterranean to India; cultivated and naturalized in many temperate regions of the world.

Seedlings are eaten as green salad, and the plant is grazed by animals. In folk medicine the seeds are used as an active expectorant and pulmonary stimulant and also as a tonic and aphrodisiac.


3 cm

Sinapis allionii Jacq., Hort. Vindob. 2:79 (1772).
Syn. *Raphanus turgidus* Pers., Syn. 2:209 (1806).

Sinapis, Latin word for mustard plant; *allionii*, named in honor of Carlo Allioni (1728–1804), Italian botanist, professor at Turin.

Annual glabrous erect herb, 15–50 cm; stems slightly furrowed, branching mainly in upper parts; leaves petiolate, pinnatipartite to pinnatisect; lateral lobes narrow, terminal lobe usually wider, irregularly dentate; flowers in terminal racemes, pedicels 2–5 mm long, slender, becoming accrescent and longer in fruit; calyx spreading; petals yellow, veined, with a long claw; siliqua ovoid-ellipsoid, 1.5–4 cm, including the oblong-ovate beak, with 3–6 prominent nerves, slightly constricted between the seeds; beak about 1 cm long, subulate-conical; seeds almost globose, about 2 mm diameter, dark brown.

Cultivated ground, especially flax fields.

Endemic to Egypt.

3 cm

Sinapis arvensis L., Sp. Pl., ed.1, 668 (1753).

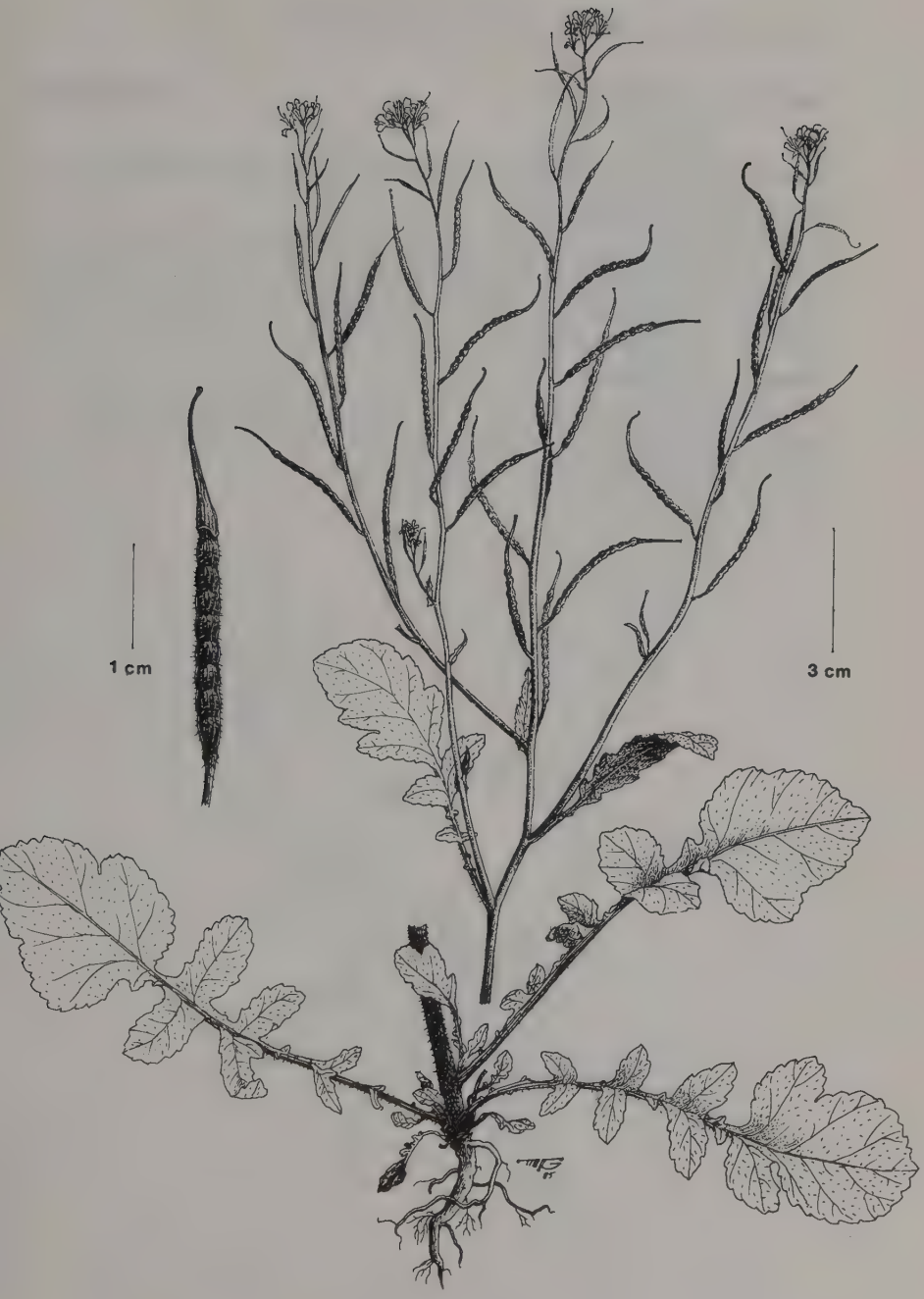
خردل *khardal* Charlock, Wild mustard, Corn mustard

Arvensis = growing in or pertaining to cultivated fields.

Annual hispid herb, 20–80 cm; stems erect, much branching, slightly furrowed; basal leaves large, to 20 cm long, petiolate, lyrate or pinnatisect, irregularly dentate; upper leaves much smaller, sessile, slightly lobed or undivided; flowers in terminal rather dense racemes; petals yellow, pedicels 2–3 mm long, slender, becoming accrescent, spreading and longer in fruit; siliqua 2.5–4 cm long, including the beak, constricted between the seeds, cylindrical, with about 5 distinct longitudinal ribs, hispid; beak 1–1.2 cm long, conical, straight or slightly curved, usually 1-seeded; seeds globose, about 1.5 mm diameter, brown.

Fields, gardens, roadsides.

Mediterranean, Europe, Caucasus to central Asia; naturalized in other temperate regions.


1 cm
3 cm

Sisymbrium irio L., Sp. Pl., ed.1, 659 (1753).

فِجل الجمل *figl al-gamal* London rocket

Sisymbrium from *sysymbrion*, an old Greek name applied to a group of plants resembling *Sisymbrium*.

Annual herb, 15–50 cm, almost glabrous, stems erect, richly branching; basal leaves petiolate, pinnatisect, upper pinnatipartite or with few lobes; flowers pedicelled, in long leafless racemes; petals 3 mm, yellow; siliqua 5–6 cm, narrow, linear, spreading, with 3-nerved valves; seeds oblong, yellowish brown.

Fields, gardens, orchards, irrigation canals, roadsides, waste ground.

Mediterranean, Europe, western Asia to Afghanistan; introduced into tropical Africa, North America, and Australia.

3 cm

Chrozophora plicata (Vahl) A. Juss. ex Spreng., Syst. Veg. 3:850 (1825).

Syn. *Croton plicatum* Vahl, Symb. Bot. 1:78 (1790).

نيلي *nīli*

Chrozophora from Greek *chrozo* = to dye, and *phorus* = carrying, as some species were used for dying; *plicata* = folded, describing the leaves.

Annual perennating herb, 30–60 cm, woolly with stellate hairs; stems procumbent, dichotomously branching; leaves long-petioled, up to 5 cm broad, ovate, plicate; flowers axillary and terminal, in short racemes; male flowers sessile, stamens about 15, in 3 whorls; female flowers in groups of 3, pedicelled; capsule 6x8 mm, subglobular, long-pedicelled, stellate-hairy, 3-seeded, seeds 3–4 mm, smooth.

Waste ground, roadsides.

Tropical and subtropical Africa and Asia.

3 cm

Euphorbia arguta Banks & Sol. in Russell, Nat. Hist. Aleppo, ed.2, 2:253 (1794).

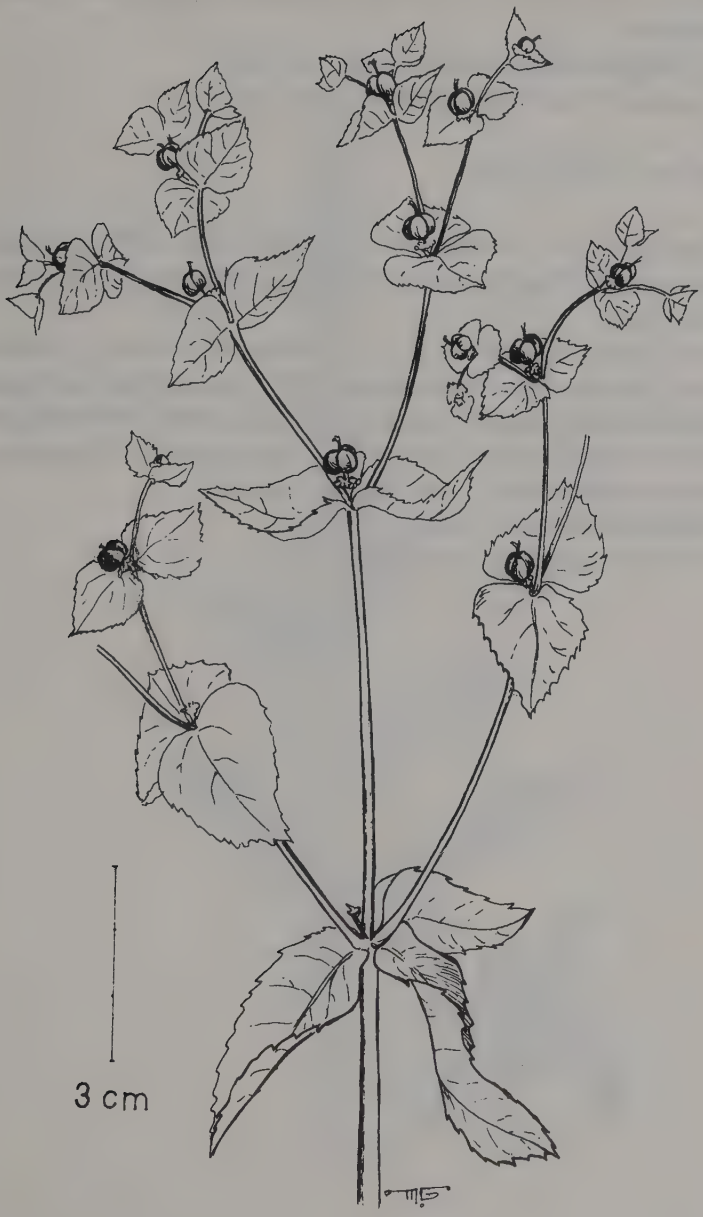
لِبّين *libbēn*

Euphorbia named in honor of Euphorbus, physician to Juba, King of Mauritania; *arguta* = sharply toothed or serrate, allusion to the leaf margin.

Annual glaucous herb, 15–50 cm; stems erect, branching from the base; upper leaves sessile, oblong-lanceolate, serrate, acute; floral leaves cordate-ovate, lower leaves petiolate; inflorescence dichotomously branched; cyathia 1 mm; involucre fringed-dentate, glabrous; capsule 3–5 mm across, almost globose; seeds 1.5 mm, subglobular, smooth, with a small caruncle.

Fields, gardens.

Eastern Mediterranean.


3 cm

Euphorbia forsskalii J. Gay in Webb & Berth., Phyt. Canar. 3:240 (1860–47).

Syns. *E. aegyptiaca* Boiss., Cent. Euph. 13 (1860).
E. thymifolia Forsskål, Fl. Aegypt.–Arab., 94 (1775).

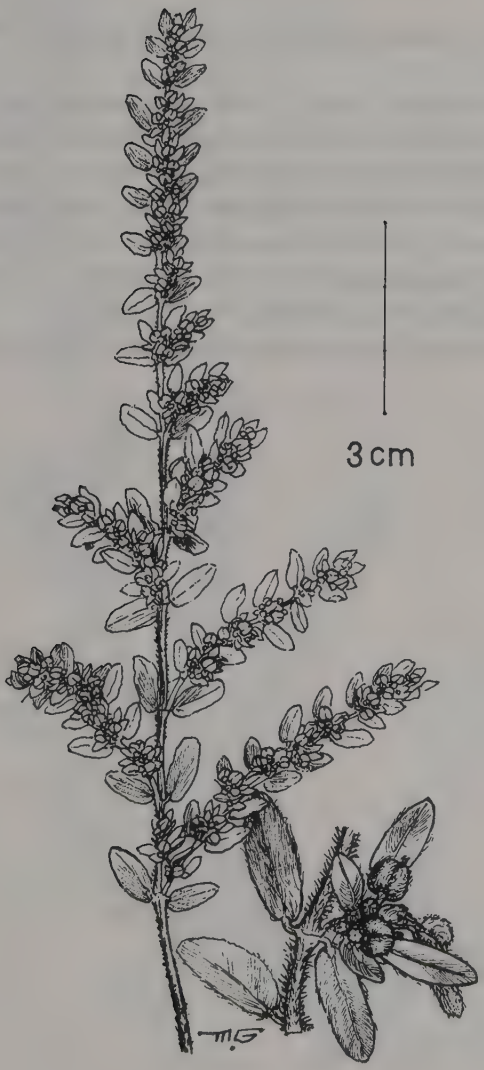
شَعر العجوز *sha^{c}r al-^{c}agūz*

Forsskalii named in honor of Peter Forsskål (1732–1763), Swedish botanist, author of *Flora Aegyptiaco-Arabica*, published in 1775 after his death in Yemen.

Annual adpressed hairy herb, 10–20 cm; stems many, prostrate, branching from the base, branches leafy; leaves opposite, sessile, unequal at the base, oblong-elliptical, margins entire or toothed toward the apex; inflorescence leafy, cyathia 2–4 in axillary clusters; capsule 2 mm, globular, adpressed hairy; seeds 1 mm, whitish, wrinkled.

Fields, roadsides, waste ground.

Tropical Africa, Arabia, eastern Mediterranean.


3 cm

Euphorbia granulata Forsskål, Fl. Aegypt.-Arab., 94 (1775).

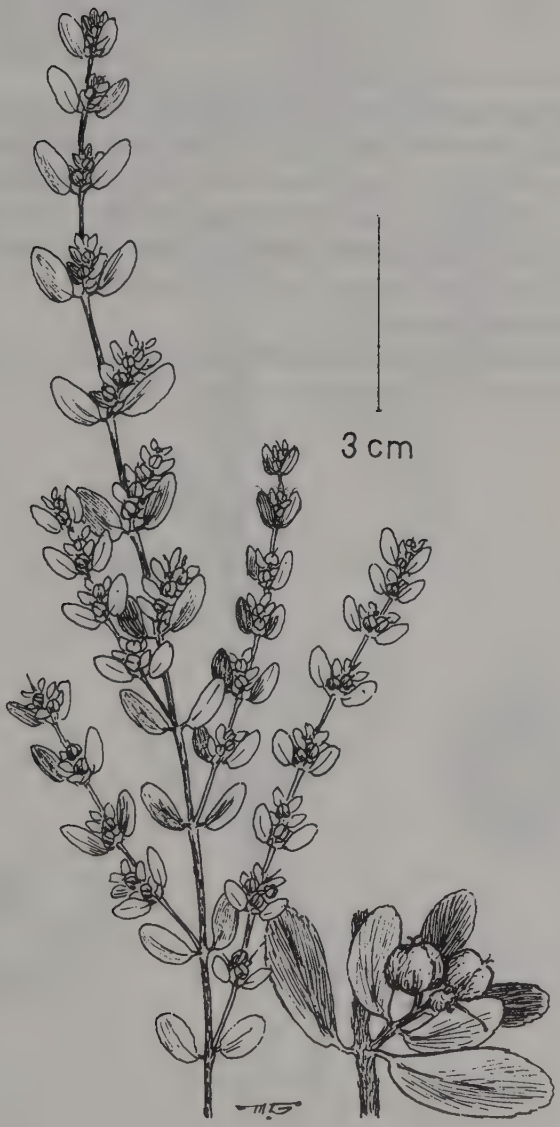
لِبّينة *libbēna*

Granulata = granular or with small knots or tubercles, probably describing the seeds.

Annual perennating herb, 10–30 cm, densely hairy; stems richly branching at the base, spreading on the ground, branches brittle; leaves opposite, shortly-petioled, oblong-elliptic, adpressed hairy on both sides, oblique at the base, entire; inflorescence a short leafy raceme; cyathia axillary, subsessile; capsule 1.5 mm, obovoid, hairy, seeds 1x0.5 mm, oblong-conical, 4-angled, pinkish brown, transversely wrinkled.

Fields bordering desert regions, in sandy soils.

Northern Africa, Sahara, eastern Africa, eastern Mediterranean, Arabia.


3 cm

Euphorbia helioscopia L., Sp. Pl., ed.1, 459 (1753).

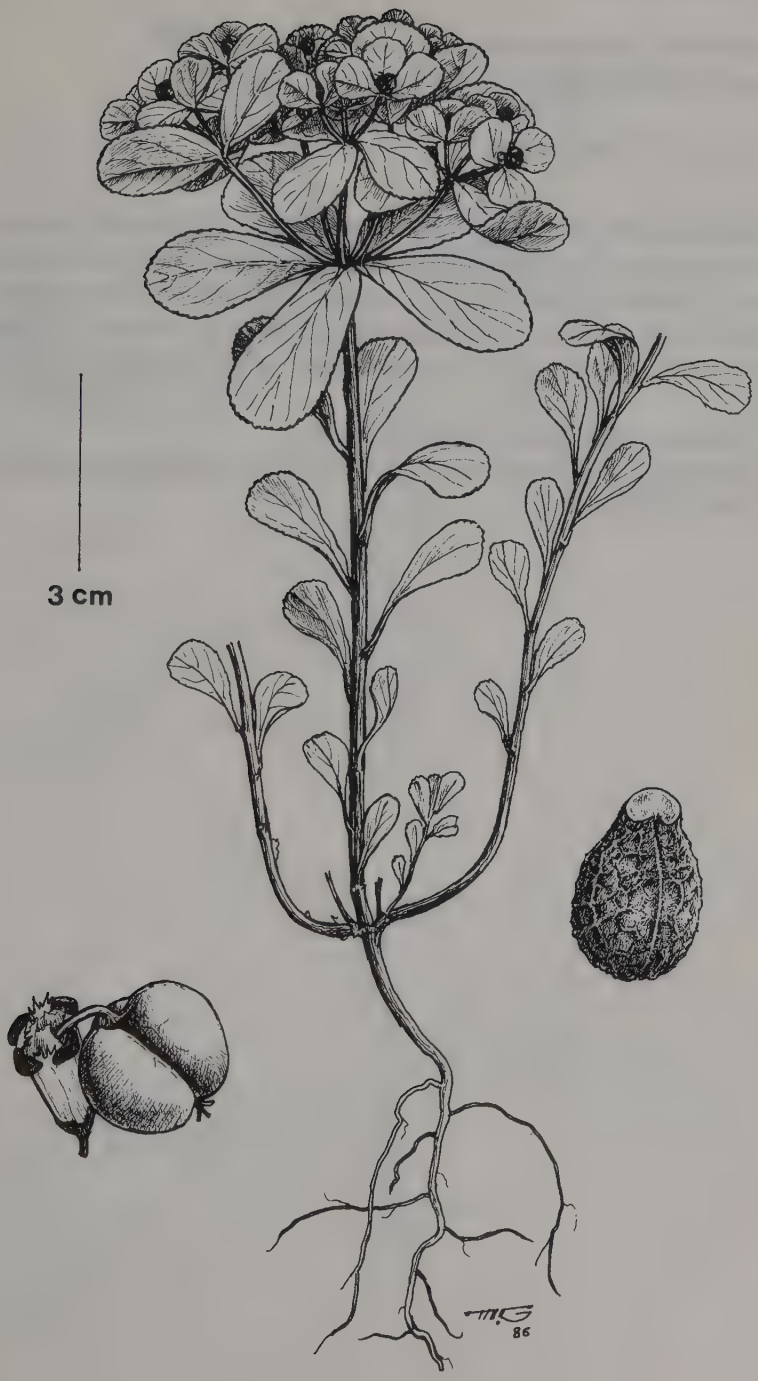
سَعْدة *sa^{c}da* Sun spurge

Helioscopia = turning toward the sun.

Annual glabrous herb, 10–30 cm; stems erect, thick, usually branching at the base; lower leaves alternate, spathulate, margins serrulate, soon deciduous; upper leaves sessile, almost triangular; inflorescence umbellate, mostly of 5 rays, rays di- or trichotomously branched, cyathia pedicelled; capsule 3 mm across, globular, glabruous; seeds ovoid, about 1.5x2 mm, reticulate, brown, with a small, flat, ovoid caruncle.

Fields, gardens, orchards.

Mediterranean, Europe, Africa, western and central Asia; introduced into many temperate regions of the world.


3 cm
86

Euphorbia heterophylla L., Sp. Pl., ed.1, 453 (1753).
Syn. *E. geniculata* Ortega, Hort. Matr. Dec., 18 (1797).

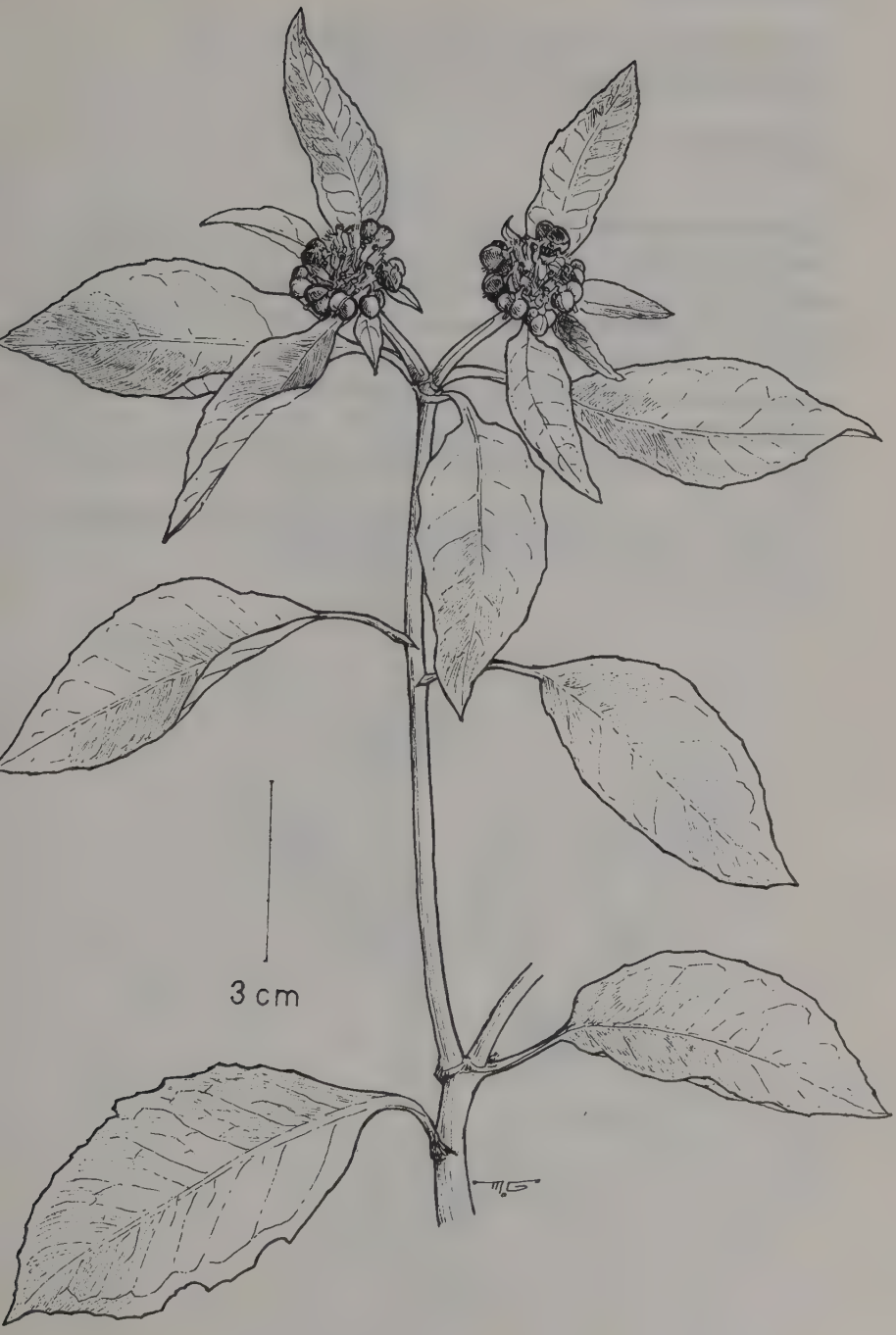
لَبن الحُمارة *laban al-ḥumāra*

Geniculata = abruptly bent like a knee, allusion to the aspect of the stem.

Annual herb, 20–80 cm; stems dichotomously branching; leaves lanceolate-elliptical, petiolate, margins entire or denticulate; inflorescence terminal, of dense corymbose cymes, cyathia pedicellate; capsule 4–5 mm, subglobose, glabrous or slightly hairy; seeds 2 mm, trigonous tuberculate.

Summer weed in fields, gardens, orchards.

Native of Central America; naturalized in many tropical and subtropical regions of the world.


3 cm

Euphorbia hirta L., Sp. Pl., ed.1, 454 (1753).
Syn. *E. pilulifera* L., Sp. Pl., ed.1, 454 (1753).

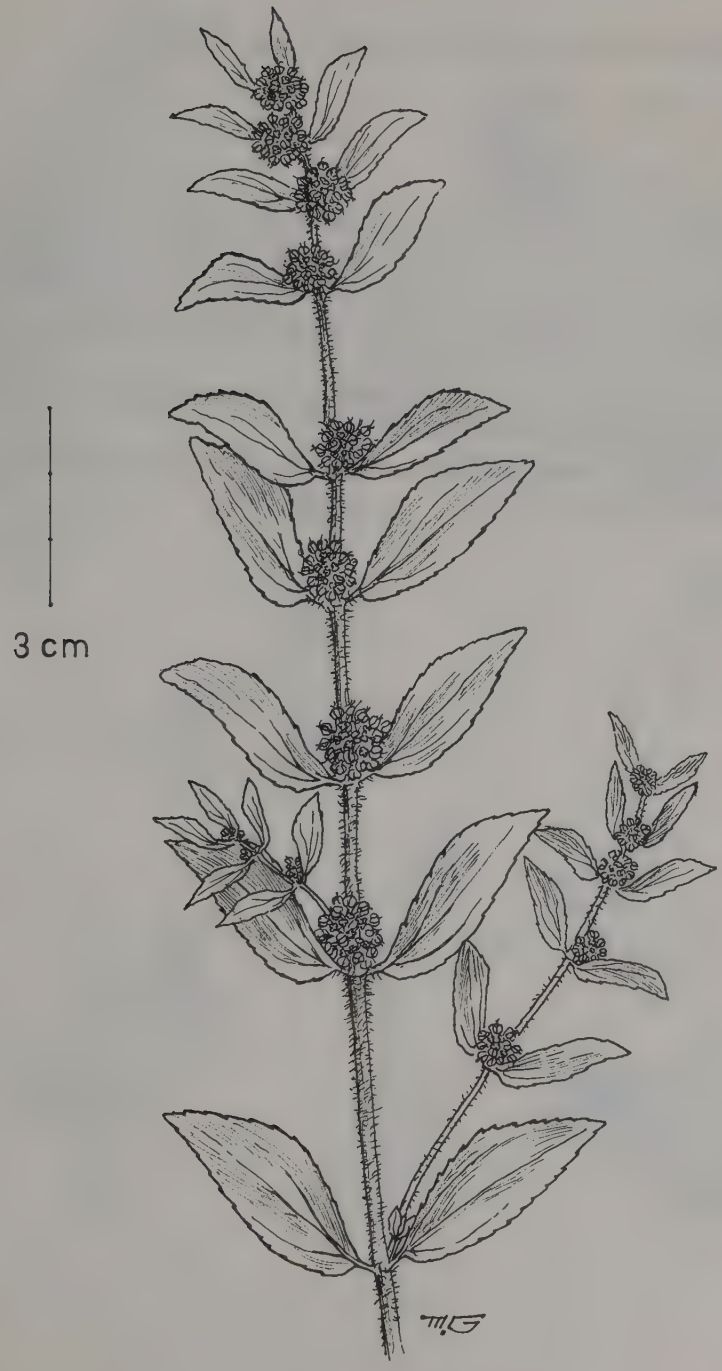
لِبّين *libbēn*

Hirta = with short rather stiff hairs.

Annual hispid-hairy herb, 20–50 cm; stems procumbent or ascending, richly branching; leaves opposite, lanceolate-elliptic, shortly petioled, base oblique, apex acute, margins serrulate; inflorescence of dense axillary clusters, cyathia bisexual or male; capsule 2 mm across, 3-sulcate, appressed-hairy; seeds 1 mm, tetragonous, reddish, transversely wrinkled, caruncle absent.

Fields, especially in Upper Egypt; introduced around 1930 and naturalized.

Native of southern United States and Central America; naturalized in many tropical and subtropical regions of the Old World.


3 cm

Euphorbia indica Lam., Encyc. Méth., 2:423 (1786).

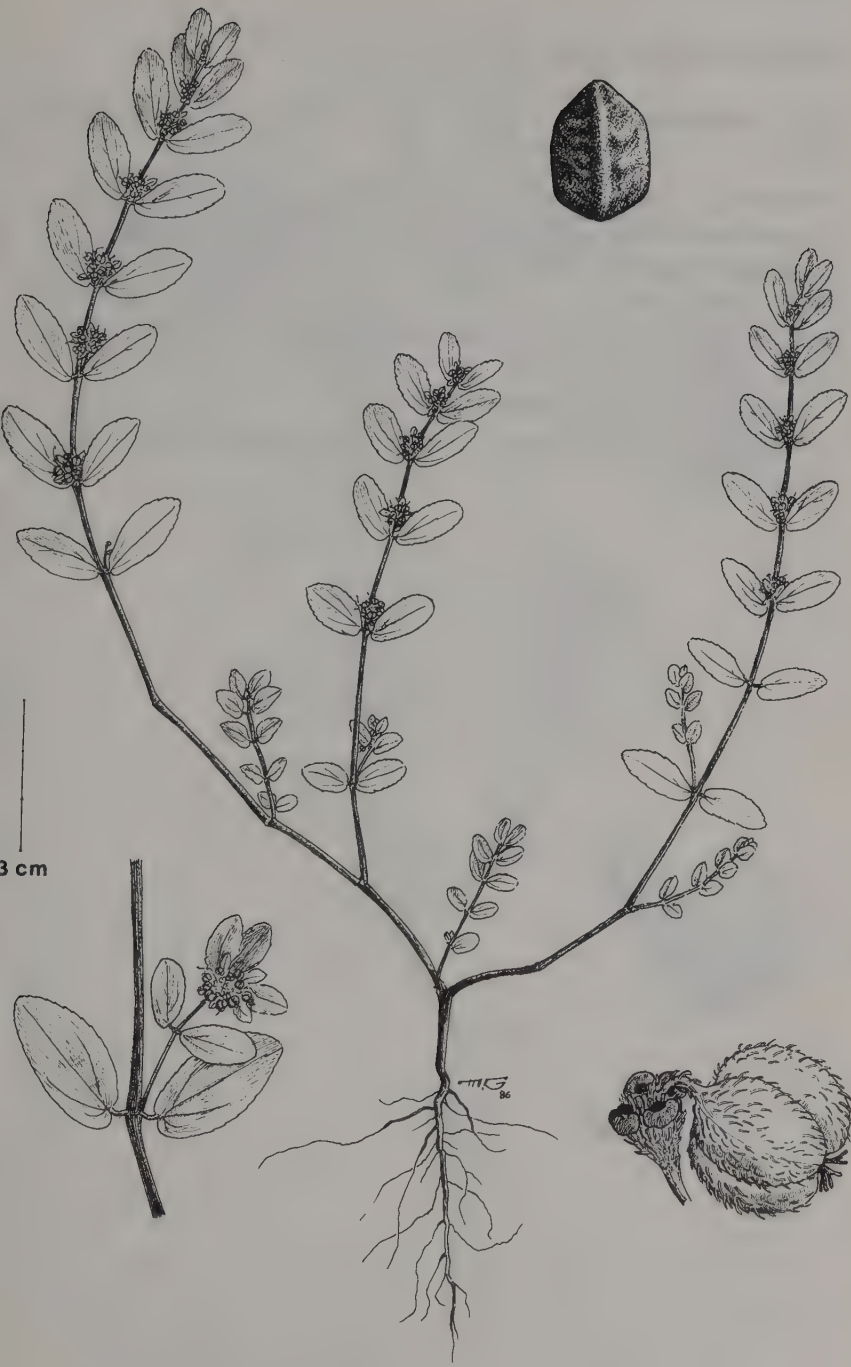
لِبّين *libbēn*

Indica = of Indian origin.

Annual herb, 15–50 cm, stems decumbent or ascending; leaves opposite, short-petioled, ovate-elliptic, glabrous or slightly hairy, base oblique, apex rounded, margin serrulate; cyathia in leafy raceme-like cymes; capsule pubescent, subglobose; seeds ellipsoid, tetragonous, reddish brown or grayish, caruncle absent.

Fields, gardens, orchards; more abundant in Upper Egypt than in the Nile Delta; introduced and naturalized.

Tropical and subtropical Africa, western and central Asia; naturalized in some other parts of the world.


3 cm

Euphorbia peplus L., Sp. Pl., ed.1, 456 (1753).

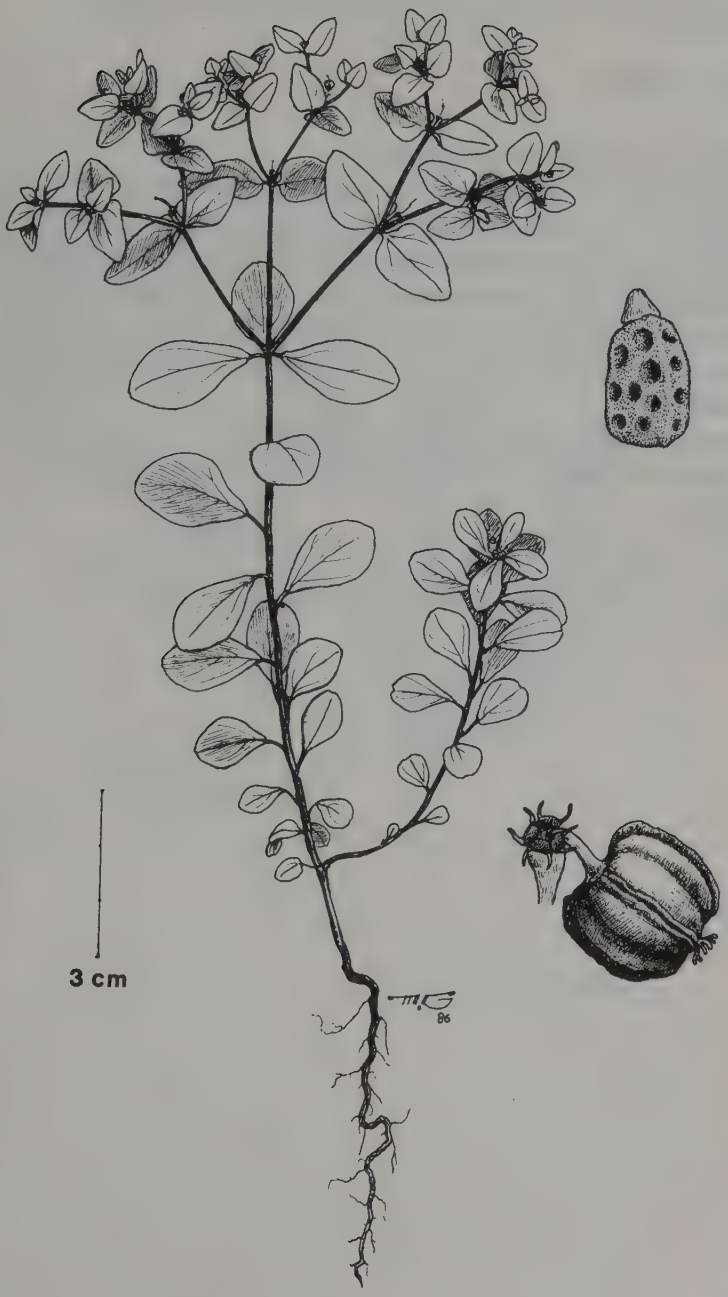
وِدَّينة *widdayna* Petty spurge

Peplus = ancient dress of Greek women, allusion to the plant unclear.

Annual herb, 10–25 cm, glabrous; stems erect, branching near the base; lower leaves petiolate, obovate, entire; upper leaves sessile, broadly ovate; cyathia pedicelled; capsule 2 mm, subglobose, deeply 3-grooved; seeds 1.5 mm, white grayish, hexagonous, with 2 furrows and 4 rows of pits; caruncle depressed-conical.

Winter weed in fields, gardens, orchards.

Mediterranean, Europe, western and central Asia; introduced into many regions of the world.


3 cm

Euphorbia prostrata Ait., Hort. Kew., ed.1, 2, 139 (1789).

لِبّينة *libbēna*

Prostrata = lying flat on the ground.

Annual herb, 5–15 cm; stems branching, prostrate or decumbent; leaves opposite, short-petioled, oblong-elliptic, glabrous on the upper surface, slightly hairy beneath; base unequal, apex obtuse, margin entire or slightly serrulate; cyathia axillary, mostly solitary, sometimes in clusters of 2–4; capsule 1–1.5 mm, ovoid, sharply 3-angled, with spreading hairs at the angles; seeds 1 mm, pale reddish, 4-angled, transversely wrinkled.

Lawns, gardens, fields; introduced and naturalized.

Native of tropical America; naturalized in various parts of the Old World.

3 cm

Fumaria densiflora DC., Cat. Hort. Monsp., 113 (1813).

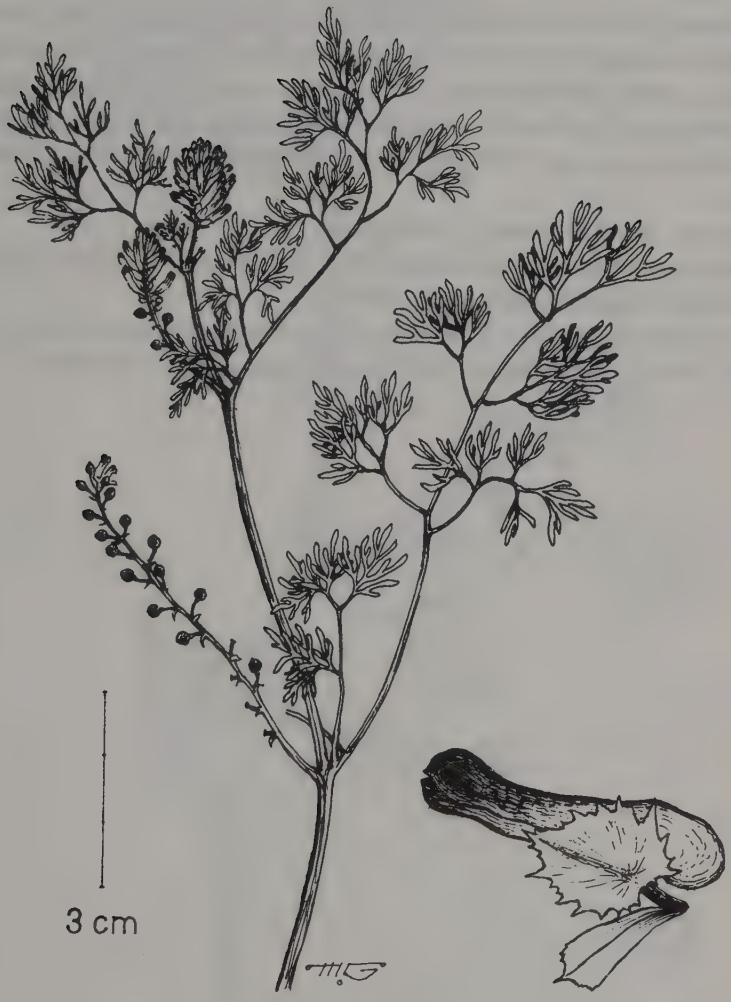
زِيتة *zēta* Dense-flowered fumitory

Fumaria from Latin *fumus* = smoke, as some species have a smoky odor; *densiflora* = densely covered with flowers.

Erect or diffuse annual, 10–25 cm; stems ridged and angular; leaves 2–3-pinnatisect, segments narrow-linear; inflorescence terminal and axillary short racemes densely covered with flowers, later lax in fruit; flowers pedicelled, petals pink with dark red tips; sepals large, broadly ovate, dentate; fruit 2.5 mm diameter, slightly rugose when ripe, subtended with a bract longer than the fruit pedicel.

Fields, gardens, orchards.

Mediterranean, western Europe, western Asia.


3 cm

Fumaria parviflora Lam., Encyc, Méth., 2:567 (1788).

حَشيشة الصُّبيان *ḥashīshat al-ṣabyān* Small-flowered fumitory

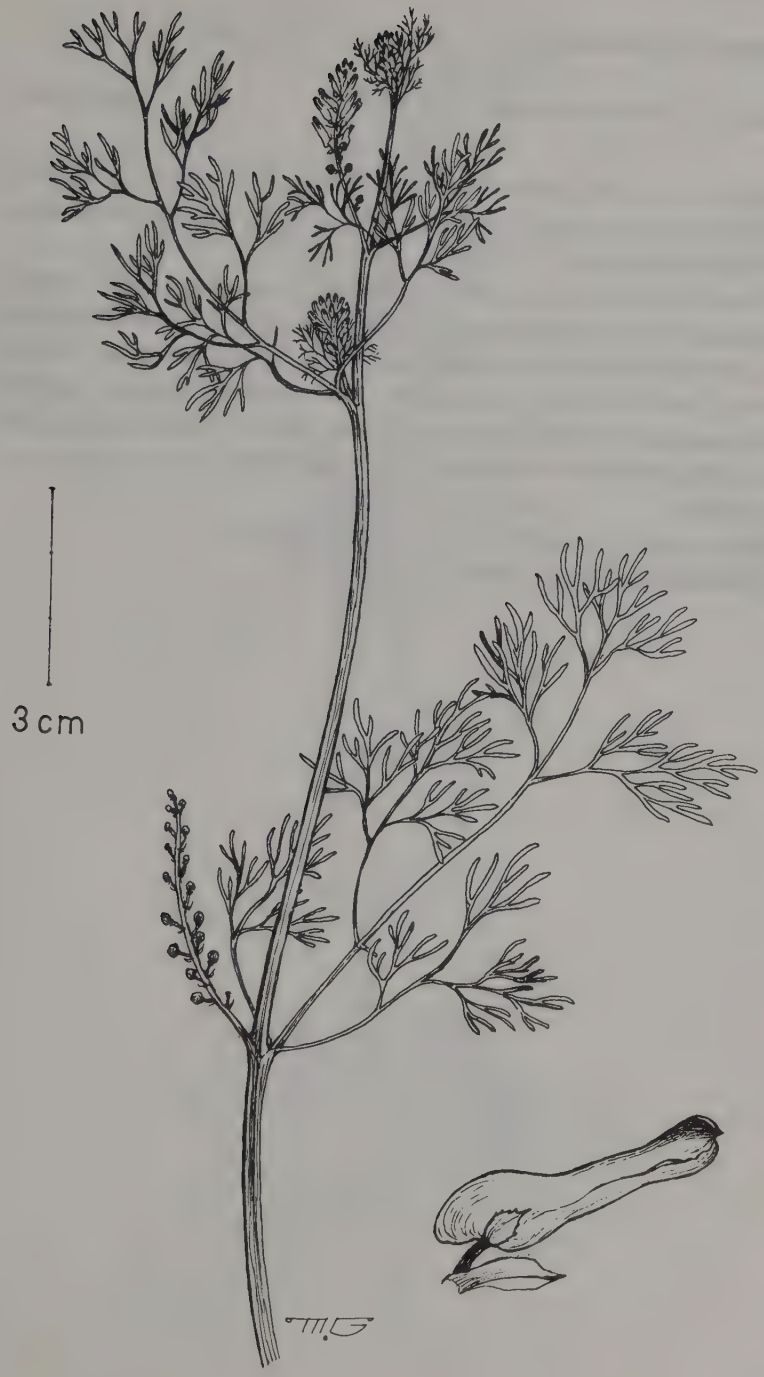
Parviflora = small flowers.

Annual glabrous diffuse herb, 5–20 cm; stems angular, branching from the base; leaves 2–3-pinnatisect, segments linear-oblong; inflorescence raceme, rather dense in flower, elongated in fruit; flowers shortly pedicelled; sepals very small, much narrower than the corolla, denticulate; corolla white or pink, with purplish tips; fruit subglobular, rugose when ripe.

Fields, gardens, orchards, waste ground.

Mediterranean, Europe, western Asia; introduced into North America and other temperate regions of the world.

The plant is used in folk medicine as an astringent, sedative, depurative, laxative, and diuretic. It is also used to keep children's vitality.


3 cm

Lamium amplexicaule L., Sp. Pl., ed.1, 579 (1753).

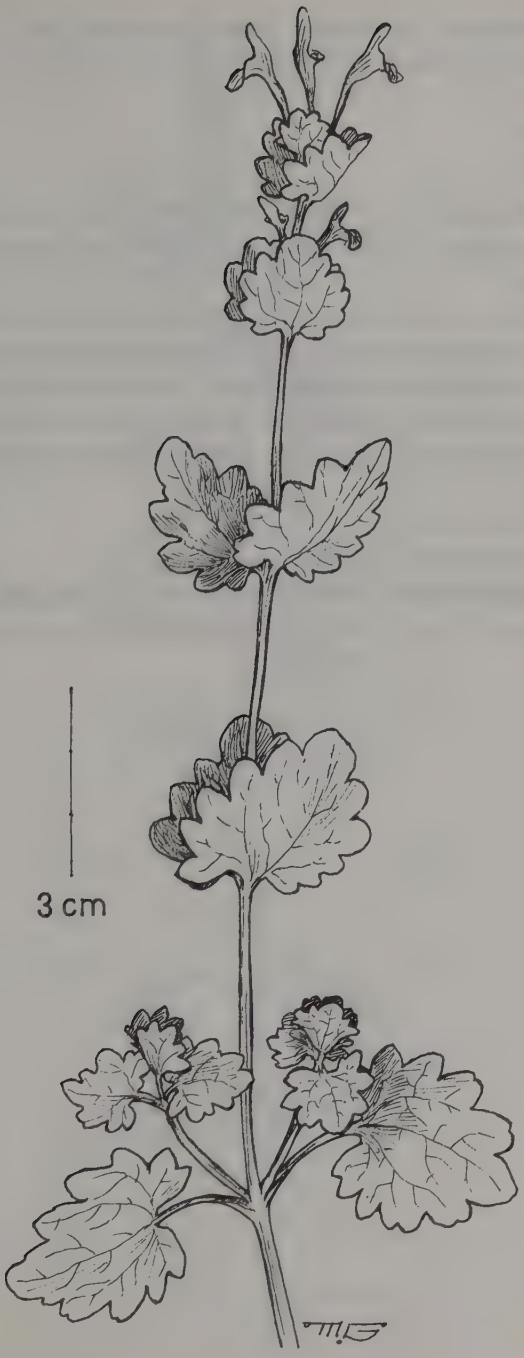
فُم السمكة *fumm al-samaka* Henbit nettle

Lamium from Greek *lamios* = throat, alluding to the throatlike appearance of the flower; *amplexicaulis* = amplexicaul or clasping to the stem, referring to the bracts.

Annual herb, 15–40 cm, densely to slightly pubescent; stems usually branching from the base; leaves petioled, ovate-orbicular, margins irregularly crenate; bracts of the verticillaster subsessile to amplexicaul, usually broader than longer; calyx about 6 mm, teeth shorter than the calyx-tube; corolla pinkish purple, 15–20 mm, often longer, straight, upper lip longer than the lower, anthers hairy; fruit four (often less) elongate verrucose nutlets.

Fields, gardens, orchards, often in shaded habitats.

Mediterranean, Europe, Asia.


3 cm

Mentha longifolia (L.) Hudson subsp. **typhoides** (Briq.) Harley, Notes R.B.G. Edinb., 38:38 (1980).

حَبَق *ḥabaq*

Mentha = the Latin word for mint; *longifolia* = having long leaves, *typhoides* = resembling *Typha*, probably in habit only, as both are water-loving plants.

Perennial herb, 20–80 cm, strong mint-scented; stems erect, hairy, rather woody at the base in old specimens; leaves sessile or subsessile, ovate-lanceolate to ovate-elliptic, densely gray-hairy, margins serrate, apex acute; verticillasters in terminal, branched spikes, dense in the upper part, interrupted below; calyx hairy, teeth subequal; corolla mauve, nutlets smooth.

Nile and canal banks.

Eastern Mediterranean, western Asia.

In rural Egypt the plant is added to the water of a hot bath; it is useful for skin diseases. An infusion of leaves and flowering summits is carminative.

3 cm

Alhagi graecorum Boiss., Diagn., 1, 9:114 (1849).
Syns. *A. maurorum* DC., non Medic., Prodr., 2:352 (1825).
A. mannifera Desv., Journ. de Bot., ser. 2, 1:120, t.4, f.4 (1813) nom. nud.

عَقول *ᶜaqūl* Camel thorn

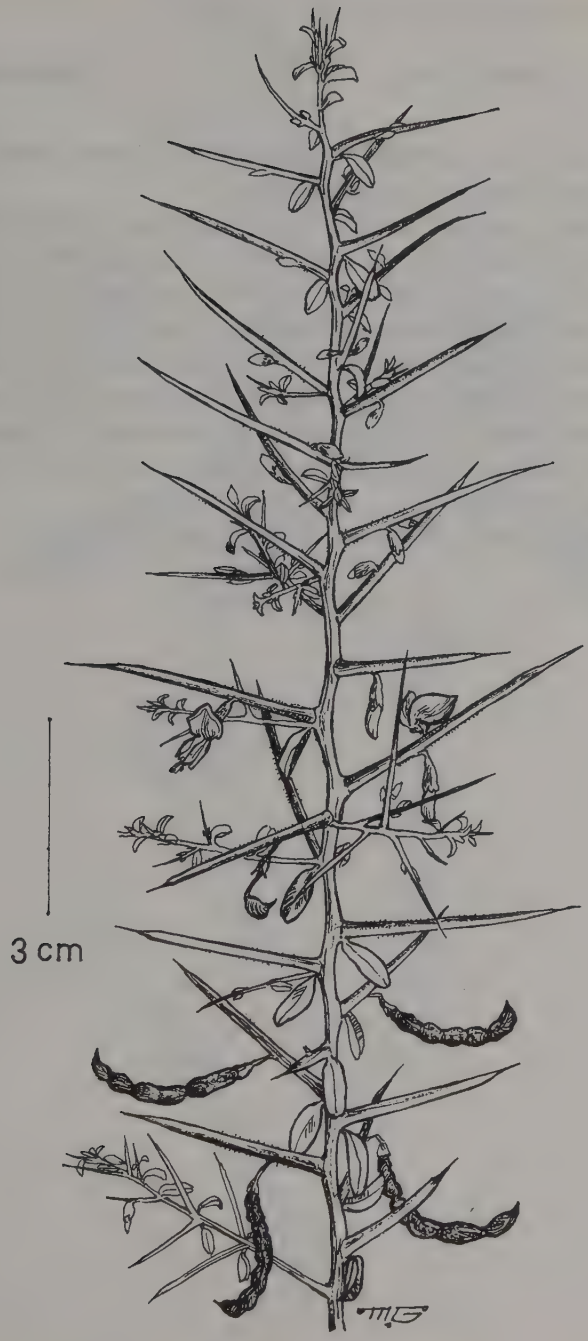
Alhagi from Arabic *al-ḥagg* = the pilgrim; *graecorum* = of Greek origin, as the plant was described by E. Boissier from Greece.

Perennial subshrub, to 80 cm; stems woody at the base in old specimens, glabrous or sparingly hairy, with long creeping stolons, often penetrating deeply into the soil; stems erect or ascending, much branched, twigs spiny at their tips; plant with well-developed leaves in moist habitats, leafless or with rudimentary leaves in dry habitats; leaves simple, oblong-elliptic or obovate, sessile or short-petioled; flowers axillary or on spiny twigs, short-pedicelled; calyx 3–4 mm, with short teeth; corolla purple, 10–12 mm; ovary silky-hairy, fruit indehiscent pod, 1–3.5 cm, 3–8-seeded, cylindrical, curved, constricted between the seeds; seeds reniform, brownish, smooth.

Waste places, Nile and canal banks, roadsides, saline soils, lake borders.

Northern Africa, southeastern Europe, eastern Mediterranean, western Asia.

The plant is grazed by camels and goats. Its dry plants are used as a laxative and vermifuge and as a treatment for rheumatic pains and bilharziasis. Guest (in Townsend and Guest 1974) writes: "The plant is renowned for its exudation—no doubt stimulated in hot dry weather by insect punctures—of a sugary sap which dries into small brownish lumps of manna" (المن).


3 cm

Lathyrus aphaca L., Sp. Pl., ed.1, 729 (1753).

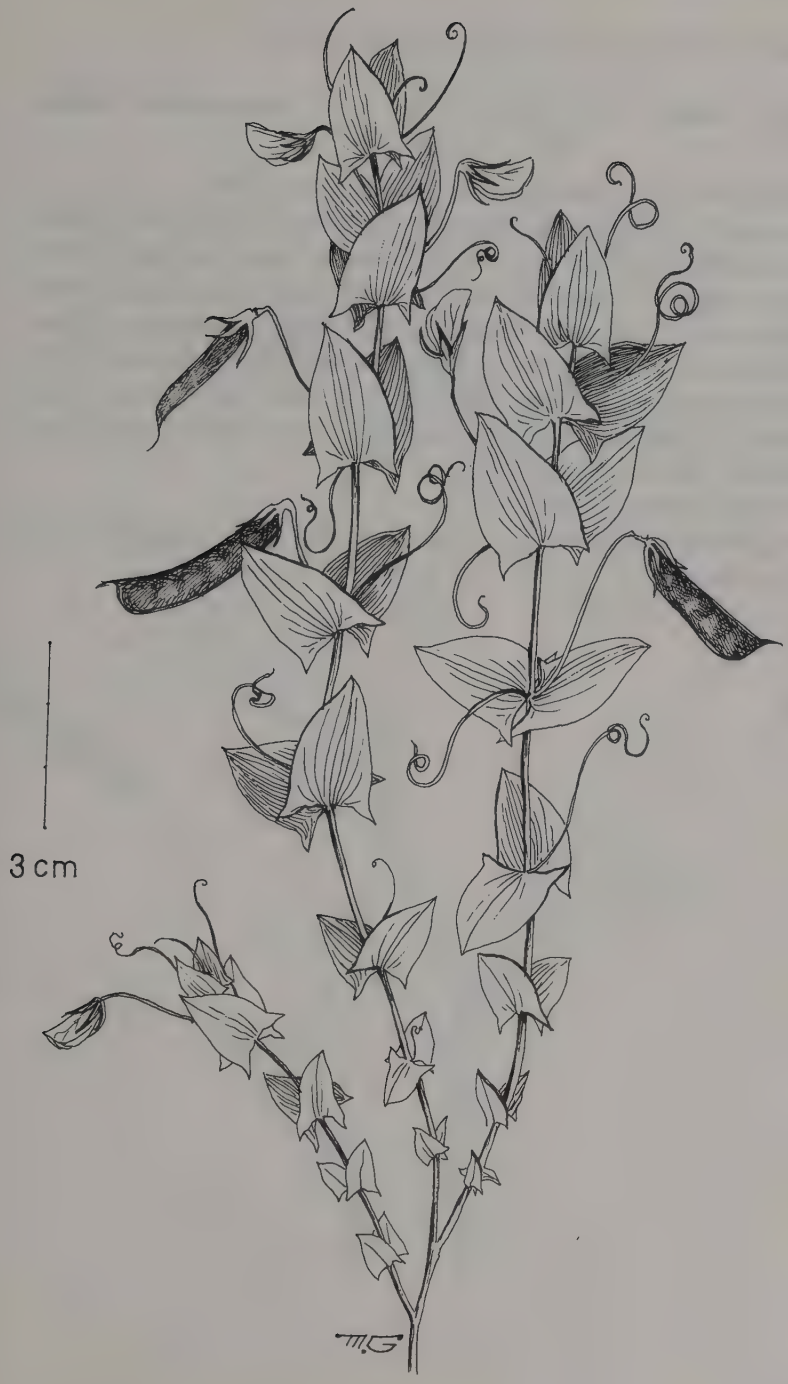
حَمَام البُرج *ḥamām al-burg* Yellow vetchling

Lathyrus = old Greek word for some leguminous plants; *aphaca* = another old Greek word for a leguminous plant.

Annual, erect, glaucous, glabrous herb, 20–50 cm; stems angular, not winged, branching mainly at the base; leaves reduced to stipules and tendrils, only young leaves pinnate (rarely seen on adult specimens, only on seedlings); stipules leaflike, sessile, simple, sagittate-hastate; tendrils filiform, to 5 cm; racemes axillary, longer than the stipules, 1–2-flowered; flowers 1–1.5 cm; calyx about 1 cm long, calyx teeth longer than the tube; corolla yellow; fruit 3–6-seeded pod, compressed, oblong-linear, beaked, reticulate; seeds about 3 mm, subglobular, dark brown, smooth.

Fields, gardens, orchards.

Mediterranean, Europe, western and central Asia.


3 cm

LEGUMINOSAE

Lathyrus hirsutus L., Sp. Pl., ed.1, 732 (1753).

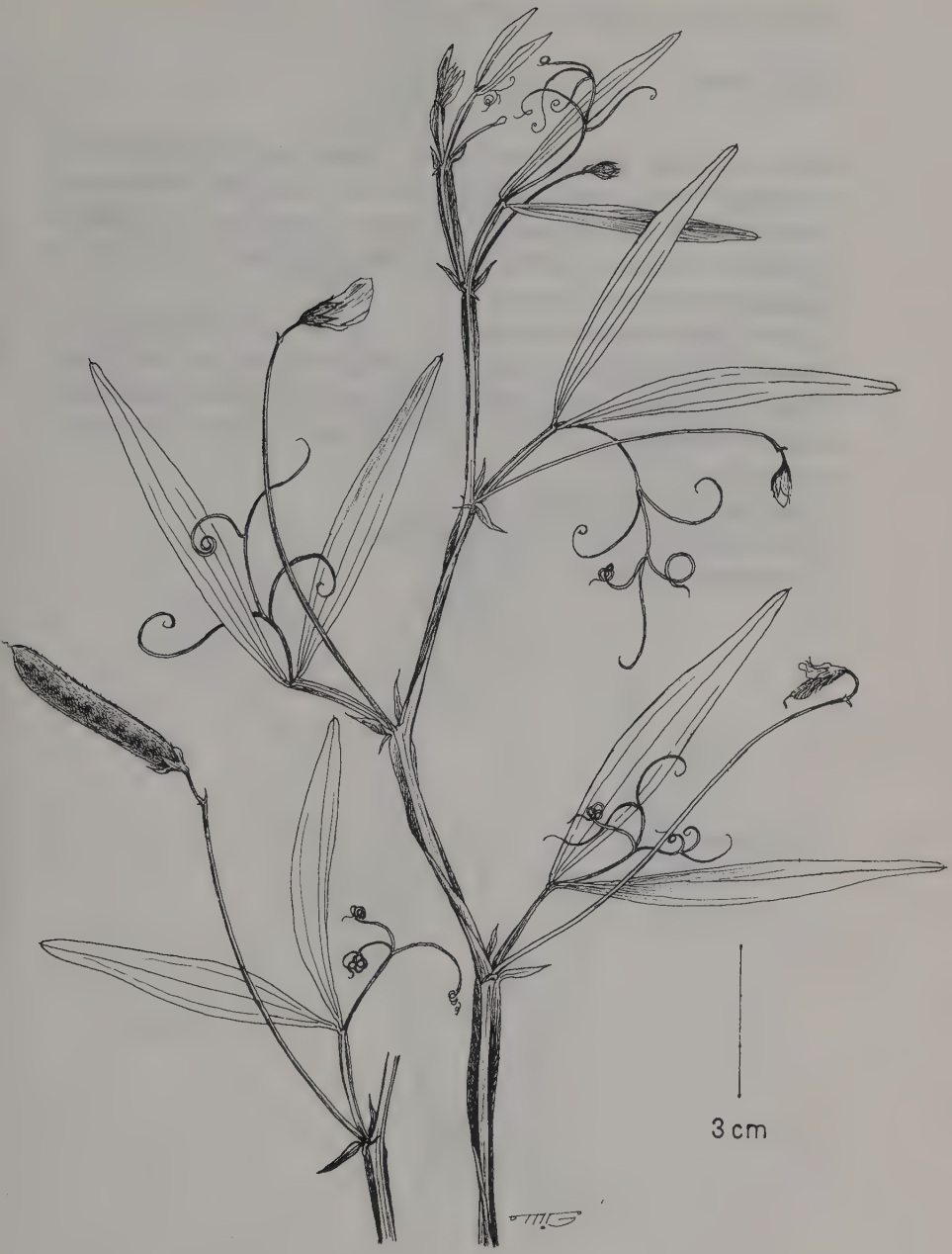
دُحريج *duḥrēg* Rough-podded vetchling

Hirsutus = having long rough hairs, referring to the fruit.

Annual herb, to 80 cm or more, vegetative parts glabrous; stems branching mainly at the base, angular, winged; leaves stipulate, with one pair of leaflets, tendrils branched, petioles narrowly winged; leaflets broadly linear, mucronate, longitudinally-veined; inflorescence axillary, 1–3-flowered, as long as or longer than the subtending leaf; flowers crimson (the standard) and blue (the wings), pedicels about 5 mm; corolla about twice the length of calyx; pod linear-oblong, hairy; seeds almost spherical, dark brown, about 3 mm.

Fields, gardens, orchards.

Mediterranean, Europe, eastern and central Asia; naturalized in the United States.


3 cm

Lotus arabicus L., Mant. 1, 104 (1767).

قَبَضْ *qabaḍ*

Lotus = old Greek name given to various leguminous plants, no relation to the sacred *lotus* of ancient Egypt known as water lily; *arabicus* = of Arabian origin, indeed the seeds of this plant were collected in Egypt by P. Forsskål and sent to Linnaeus in Sweden where they were grown in Uppsala and described by him in 1767.

Annual herb to 80 cm, glabrous or with minute adpressed hairs; stems branching; leaves 3-foliate, with a pair of stipules similar to the leaflets; inflorescence axillary, umbel-like, 2–5-flowered, much exceeding the subtending leaves; flowers about 1 cm, pink; pod straight, subtorulose, many-seeded.

Nile and canal banks, fields.

Egypt, tropical Africa, Arabia, Baluchistan.

Poisonous to livestock.

3 cm

LEGUMINOSAE

Lotus corniculatus L., Sp. Pl., ed.1, 775 (1753).

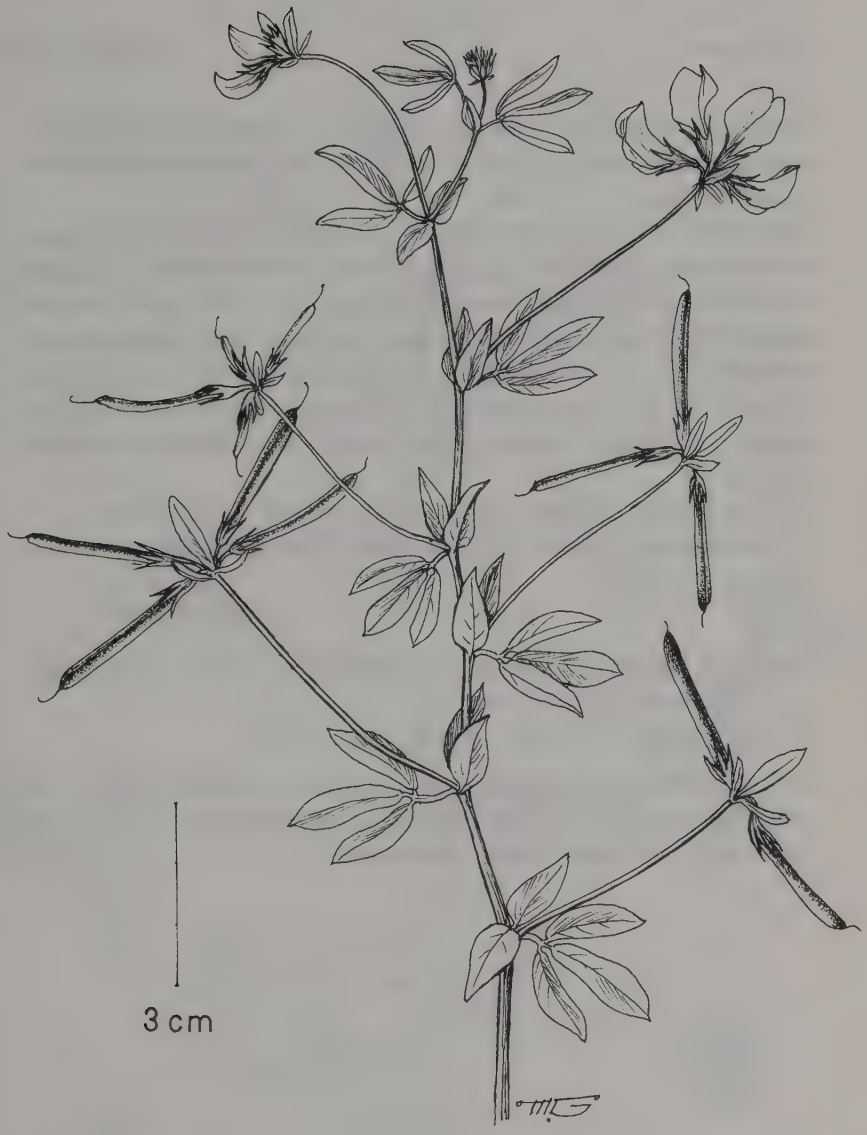
رِجل العَصفور *rigl al-ᶜasfūr* Bird's-foot trefoil

Corniculatus = with small horns, probably allusion to the fruit.

Perennial, 20–60 cm, glabrous, decumbent or ascending herb; stems often woody at the base in old specimens; leaves trifoliate; leaflets variable in shape: ovate, obovate, elliptic to broadly linear; stipules 2, slightly smaller than the leaflets; inflorescence axillary, mostly 2–6-flowered, much exceeding the leaves; flowers bright yellow or orange red, corolla twice as long as the calyx; pod glabrous, linear, subterete, brownish, glossy, with the persistent style; seeds globular, yellowish to brownish.

Canal banks, moist ground, occasionally forming colorful lawns in pure stands or mixed with other plants.

Eastern Mediterranean, eastern Africa, Europe; introduced into many temperate regions of the world.


3 cm

Medicago polymorpha L., Sp. Pl., ed.1, 779 (1753).
Syn. *M. hispida* Gaertn., Fruct. 2, 349 (1791).

نَفَلْ *nafal* Toothed medik

Medicago derived from a classical word for a forage plant, probably related to alfalfa (*Medicago sativa*); *polymorpha* = having many forms or variable in shape.

Procumbent or ascending annual, 10–50 cm; stems much branching from the base, glabrous or sparingly hairy; leaves trifoliate, long-petioled; leaflets obovate or obcordate, glabrous or slightly pilose; stipules small, with filiform lobes; inflorescence axillary, much shorter than the subtending leaves, 2–8-flowered, flowers yellow; pod discoid or cylindrical, with 2–6 coils, glabrous, spiny, or almost unarmed when spines are reduced into small tubercles; seeds oblong-elliptic, yellow to brownish, smooth.

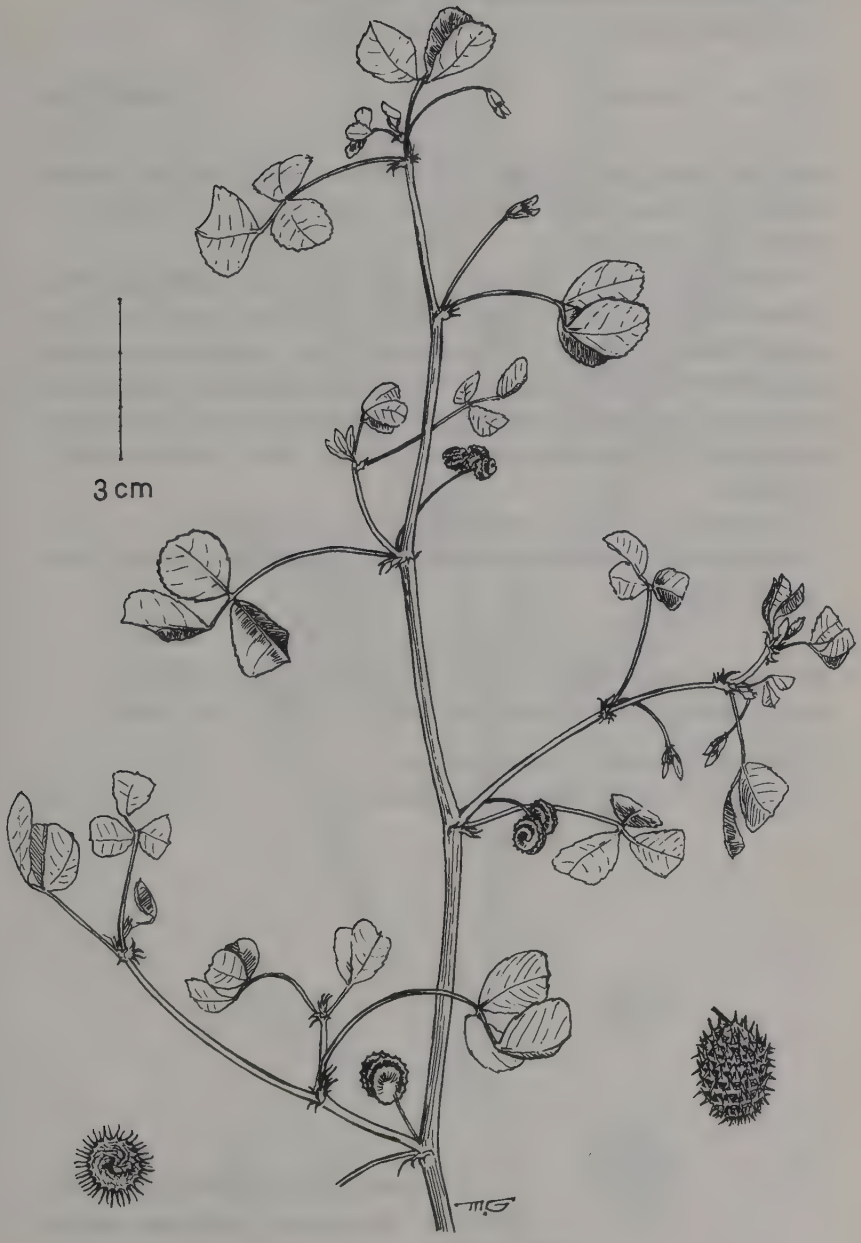
Fields, gardens, orchards, canal banks, waste ground, roadsides.

Mediterranean, Europe, Asia; introduced into many temperate regions of the world.

Medicago intertexta (L.) Mill. var. **ciliaris** (L.) Heyn, Scripta Hierosolymitana 12:129 (1963).
Syn. *M. ciliaris* (L.) All., Fl. Pedem., 1:315 (1785).

This is another rather abundant weedy species in fields and gardens. It is easily recognized by its fruit which is large, subglobose to barrel-shaped, and densely covered with multicellular hairs.

Entire plant: **Medicago polymorpha**, with unarmed fruits
Lower left: **Medicago polymorpha**, armed fruit
Lower right: **Medicago intertexta**, barrel-shaped fruit


3 cm

Melilotus indicus (L.) All., Fl. Pedem., 1:308 (1785).
Syns. *Trifolium melilotus-indica* L., Sp. Pl., ed.1, 765 (1753).
Melilotus parviflorus Desf., Fl. Atlant. 2:192 (1800).

حَندقوق *ḥandaqūq* Indian melilot

Melilotus from *meli* = honey, and *lotus* = a name used for different plants, or the honey plant, allusion to the fragrant smell of the plant; *indicus* = of Indian origin.

Annual herb, 10–50 cm; stems erect, simple or richly branching, glabrous; leaves trifoliate, petiolate, stipules denticulate; leaflets of lower leaves obovate, of upper leaves oblong-elliptic; inflorescence axillary many-flowered racemes, longer than the subtending leaves, much elongating in fruit; flowers small, yellow, corolla double the length of the calyx; pod globular 2.5 mm, reticulate; seeds yellow, usually solitary, rarely 2 in the pod.

Fields, gardens, orchards, neglected ground, canal banks.

Mediterranean, western and central Asia; introduced into many warm regions of the world.

Melilotus messanensis (L.) All., F. Pedem., 1:309 (1785).
Syn. *M. sicula* (Turra ex Vitm.) Jackson, Index Kew. 2:199 (1895).

Another related species with larger fuits.
Fields, gardens, moist ground, canal banks.

Entire plant: **Melilotus indicus**
Enlarged upper fruit: **Melilotus indicus**
Enlarged lower fruit: **Melilotus messanensis**

3 cm

Scorpiurus muricatus L., Sp. Pl., ed.1, 745 (1753).

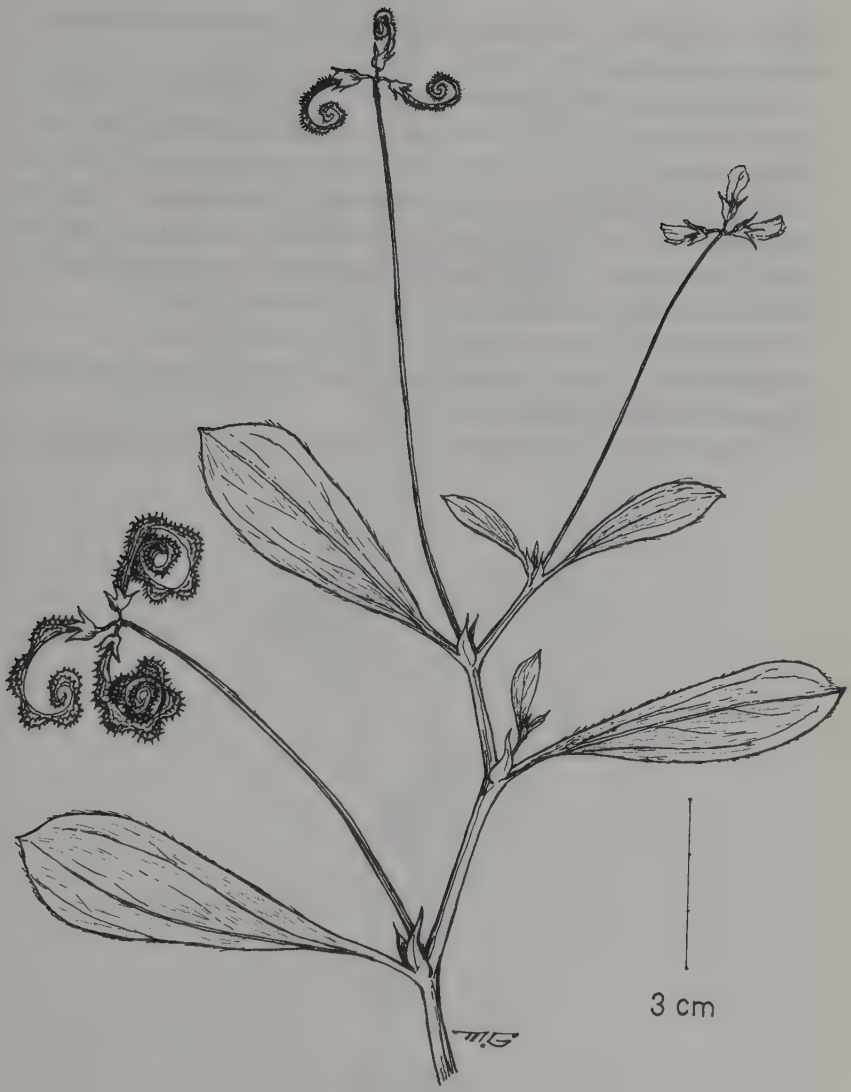
ذَنَب العقرب *dhanab al-ᶜaqrab* Scorpiontail

Scorpiurus from Greek *skorpios* = scorpion, and *oura* = tail, or scorpiontail, allusion to the shape of the fruit; *muricatus* = with sharp points, describing the texture of the fruit.

Annual herb, 15–50 cm; stems erect or ascending, branching from the base; leaves stipulate, simple, entire, oblanceolate, sparsely hairy, especially along the margins; inflorescence axillary; umbellate, longer than the subtending leaf; flowers yellow, calyx campanulate; pod 4–6 cm, coiled or curved, muricate, constricted between the seeds; seeds reniform, brown. Three varieties are known in Egypt, which differ mainly in the texture of the fruit (see Täckholm 1974).

Fields, gardens, orchards.

Mediterranean, western Asia to Iran.


3 cm

Trifolium resupinatum L., Sp. Pl., ed.1, 771 (1753).

قُرط *qurṭ* Reversed clover

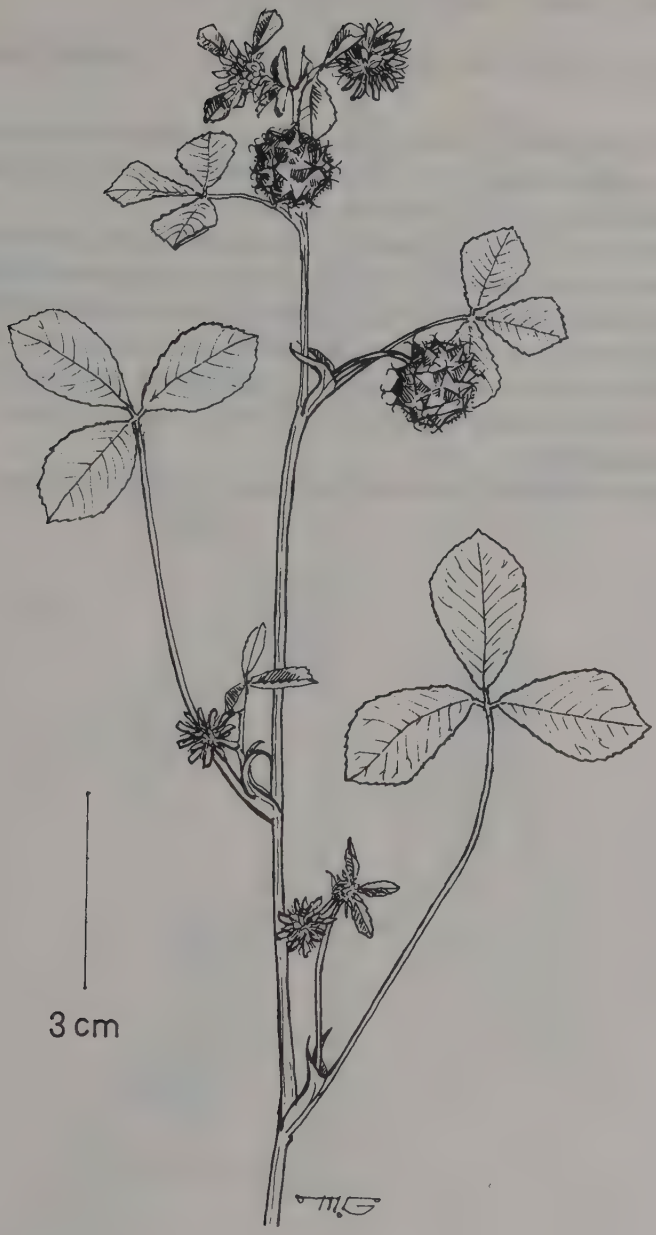
Trifolium from *tri* = three, and *folium* = leaf; *resupinatum* = bent back, allusion to the resupinate corolla.

Annual herb, 10–40 cm, glabrous; stems erect, ascending or prostrate, much branching, especially from the base; leaves stipulate, trifoliate, petioles of lower leaves 10 cm or more, upper petioles shorter; leaflets obovate to elliptical, serrulate; inflorescence axillary, shorter than the subtending leaves, globose; flowers small, crowded, resupinate, purple or pink; fruiting calyx with two long terminal teeth; pod enclosed within the persistent calyx, 1-seeded; seeds oblong, smooth, brown.

Fields, gardens, lawns, orchards, canal banks, moist ground.

Mediterranean, central Europe, western and central Asia; introduced into many temperate regions of the world.

The plant is often used as fodder for livestock and also as a lawn plant.


3 cm

Trigonella hamosa L., Syst. ed.10, 1180 (1759).

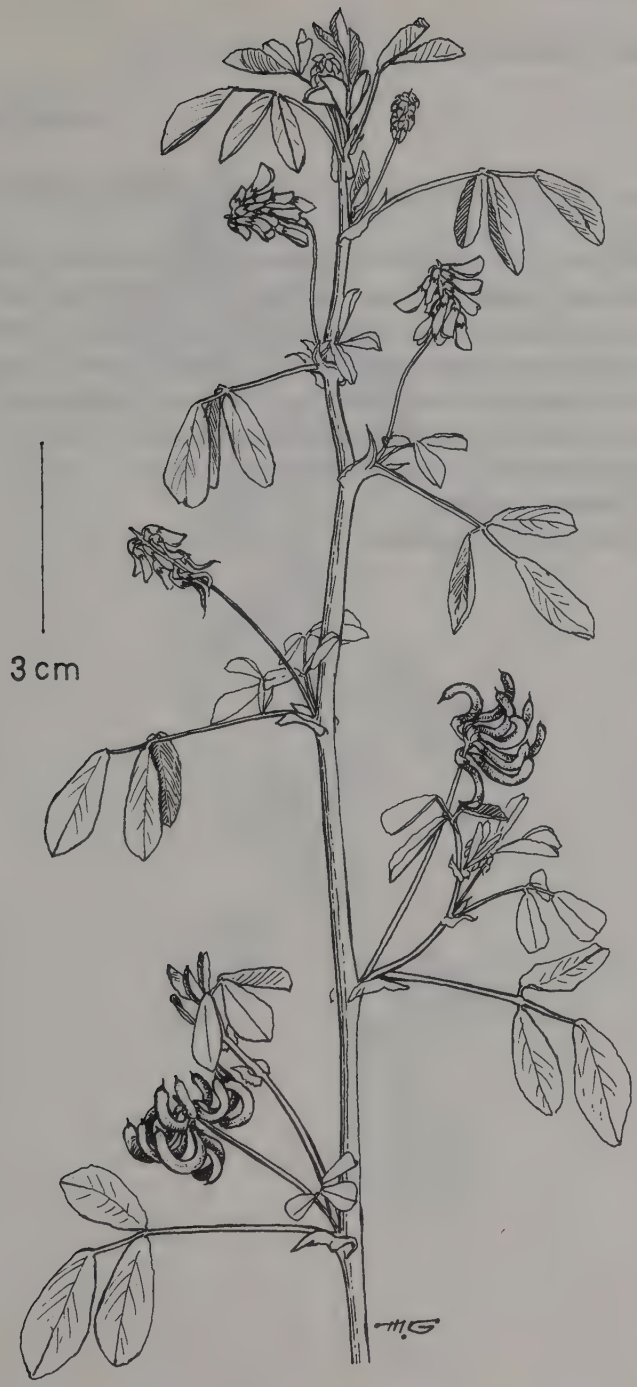
عِشب الملك *ʿishb al-malik* Egyptian fenugreek

Trigonella diminutive of Latin *trigonus* = three-cornered, allusion to the flower which is triangular in appearance; *hamosa* = hooked, allusion to the shape of the fruit which looks like a hook.

Annual herb, 15–50 cm, prostrate, decumbent or erect; stems much branching from the base; leaves stipulate, trifoliate, long-petioled; leaflets obovate, denticulate toward the apex, central leaflet petiolate, the two lateral leaflets sessile or subsessile; inflorescence axillary, umbel-like; flowers yellow, calyx about half the length of the corolla; pod 0.8–1.2 cm, semicircular or hooklike, reticulate; seeds ovoid, smooth, brownish.

Fields, gardens.

Eastern Mediterranean to central Asia, tropical and southern Africa.


3 cm

Trigonella laciniata L., Sp. Pl., ed.2, 1095 (1763).

Jagged fenugreek

Laciniata = fringed or cut into narrow lobes, allusion to the shape of stipules.

Annual herb, 15–30 cm, glabrous; stems erect or decumbent, branching from the base, leaves trifoliate, petiolate; stipules deeply laciniate; leaflets oblanceolate, serrate, terminal leaflet petioled, lateral leaflets sessile or subsessile; inflorescence axillary, umbellate, 6–12-flowered, shorter or as long as the subtending leaves; flowers bright yellow, calyx about as half long as the corolla; pod straight, linear-oblong, glabrous, transversely wrinkled, 4–6-seeded; seeds brownish.

Fields, gardens, orchards.

Egypt, northern Sudan, Arabia.

3 cm

Vicia monantha Retz., Obs. Bot., 3:39 (1783).

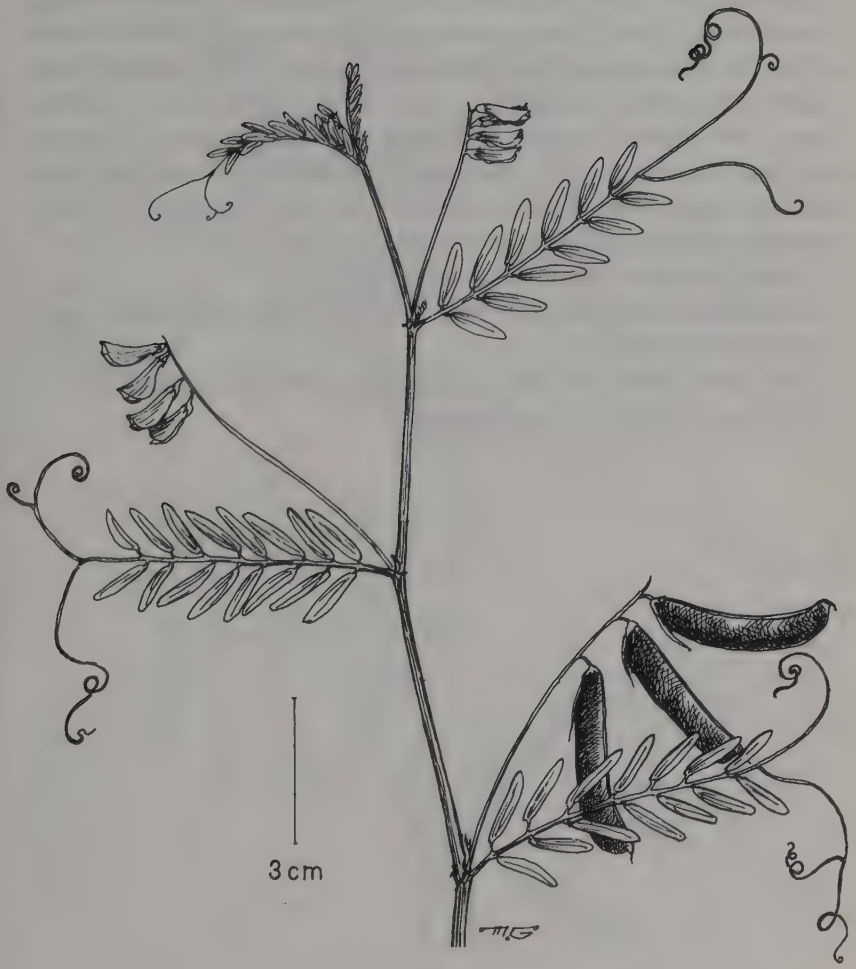
خَرِيج *kharīg* Syrian vetch

Vicia, a classical Latin name for this group of plants, probably derived from *vincio* = to bind, in reference to their clinging tendrils; *monantha* = one-flowered: the author might have overlooked this character in the specimens available to him when he first described the plant, or these specimens were not typical as the plant is rarely one-flowered.

Annual herb, 15–50 cm; stems erect or decumbent, much branching from the base, angular; leaves short-petioled, stipulate, paripinnate, with 5–8 pairs of leaflets and a terminal branched tendril; leaflets oblong-linear, sparingly hairy; inflorescence axillary racemes, 2–4-flowered, rarely 1 or 5; flowers violet blue, corolla about double the length of the calyx; pod to 3.5 cm, oblong, compressed, glabrous, ripening yellow; seeds 3–4 mm, spherical, brownish, smooth.

Fields, gardens, orchards.

Mediterranean, western Europe, western and central Asia; introduced into some temperate and warm regions of the world.


3 cm

Vicia sativa L., Sp. Pl., ed.1, 736 (1753).

جِلبان *gilbān* Common vetch

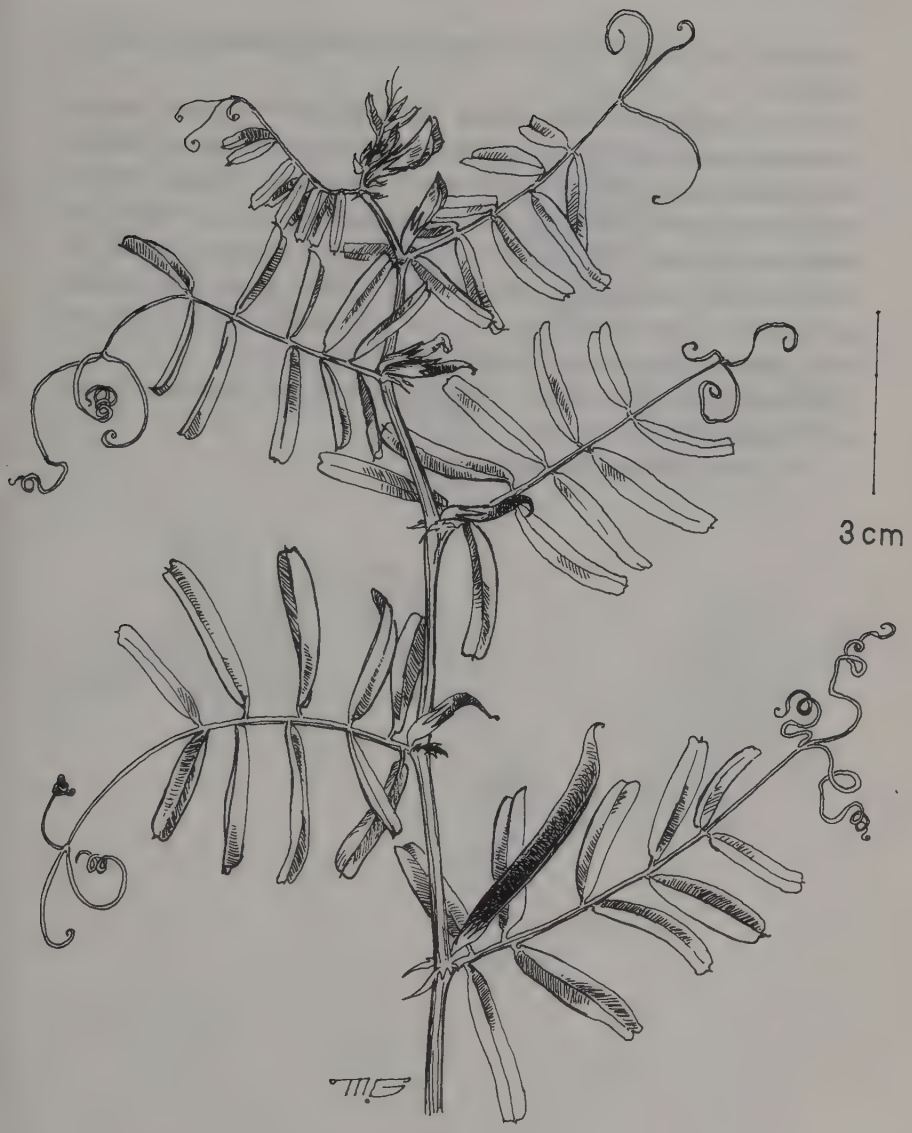
Sativa = planted as a crop.

Annual herb, 20–60 cm; stems erect to decumbent, much branching from the base; leaves stipulate, short-petioled, paripinnate, with 4–8 pairs of leaflets and a terminal branched tendril; leaflets broadly oblong, lower leaflets often oblong-obcordate; flowers solitary, rarely in pairs, axillary, sessile, or subsessile; corolla purplish or violet, about twice as long as the calyx; pod 3.5–7x0.5–1 cm, linear or slightly curved near the apex, sparingly hairy, brown or blackish when ripe; seeds compressed, dark brown to blackish, oval to almost rounded, smooth.

Fields, gardens, orchards, canal banks.

Mediterranean, Europe, Asia; naturalized in many temperate and warm regions of the world.

The plant is often cultivated as fodder for livestock. In folk medicine its infusion is used for rheumatic pains.


3 cm

Hibiscus trionum L., Sp. Pl., ed.1, 697 (1753).

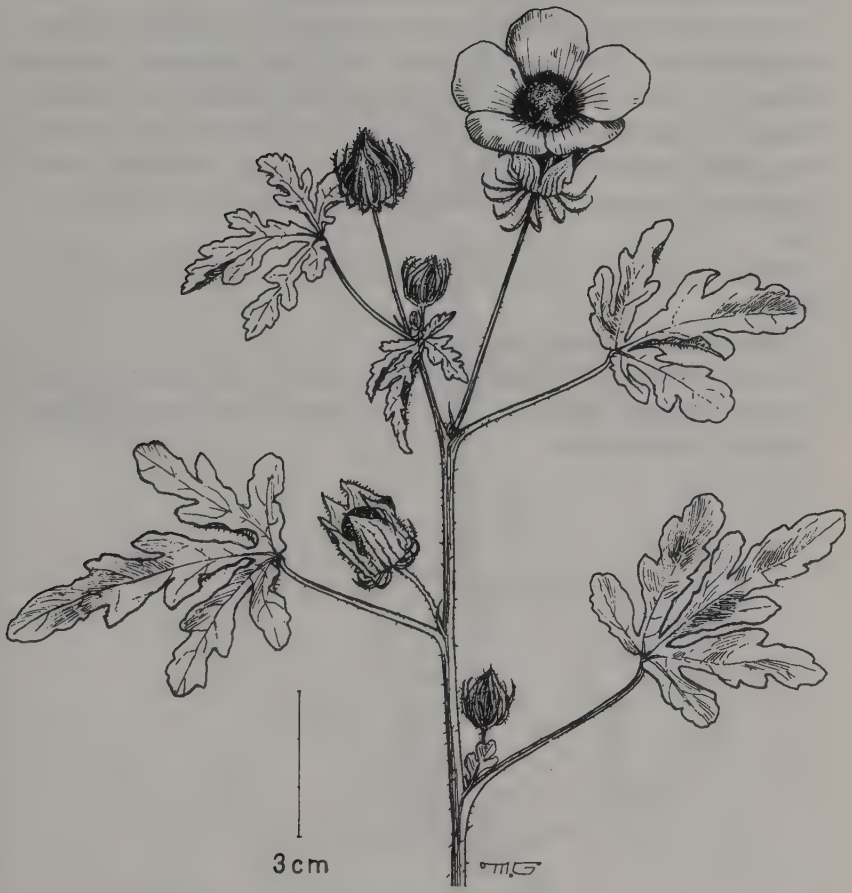
تيل شيطاني *tīl shayṭāni* Bladder hibiscus, Flower-of-an-hour

Hibiscus = the Greek name for this group of plants; *trionum* = flower of an hour.

Annual hispid herb, with stellate hairs, 20–50 cm; stems erect or spreading, much branching especially from the base; leaves long-petioled, lower leaves undivided, upper leaves 3–5-palmatisect; flowers solitary, axillary, with pedicels shorter than the subtending leaves; epicalyx of numerous, filiform, hispid bracteoles; calyx membranous, inflated, persistent, hispid along the reddish violet nerves, to 2 cm long in fruit; petals yellow, purplish at their base; fruit 1.5 cm long capsule, included in the calyx; seeds reniform, blackish, tuberculate.

Summer weed, especially in cotton fields, orchards, and canal banks; more frequent in Upper Egypt.

Tropical regions of Africa and Asia.


3cm

Malva parviflora L., Sp. Pl., ed.2, 969 (1763).

خُبَّيزة *khubbayza* Small-flowered mallow

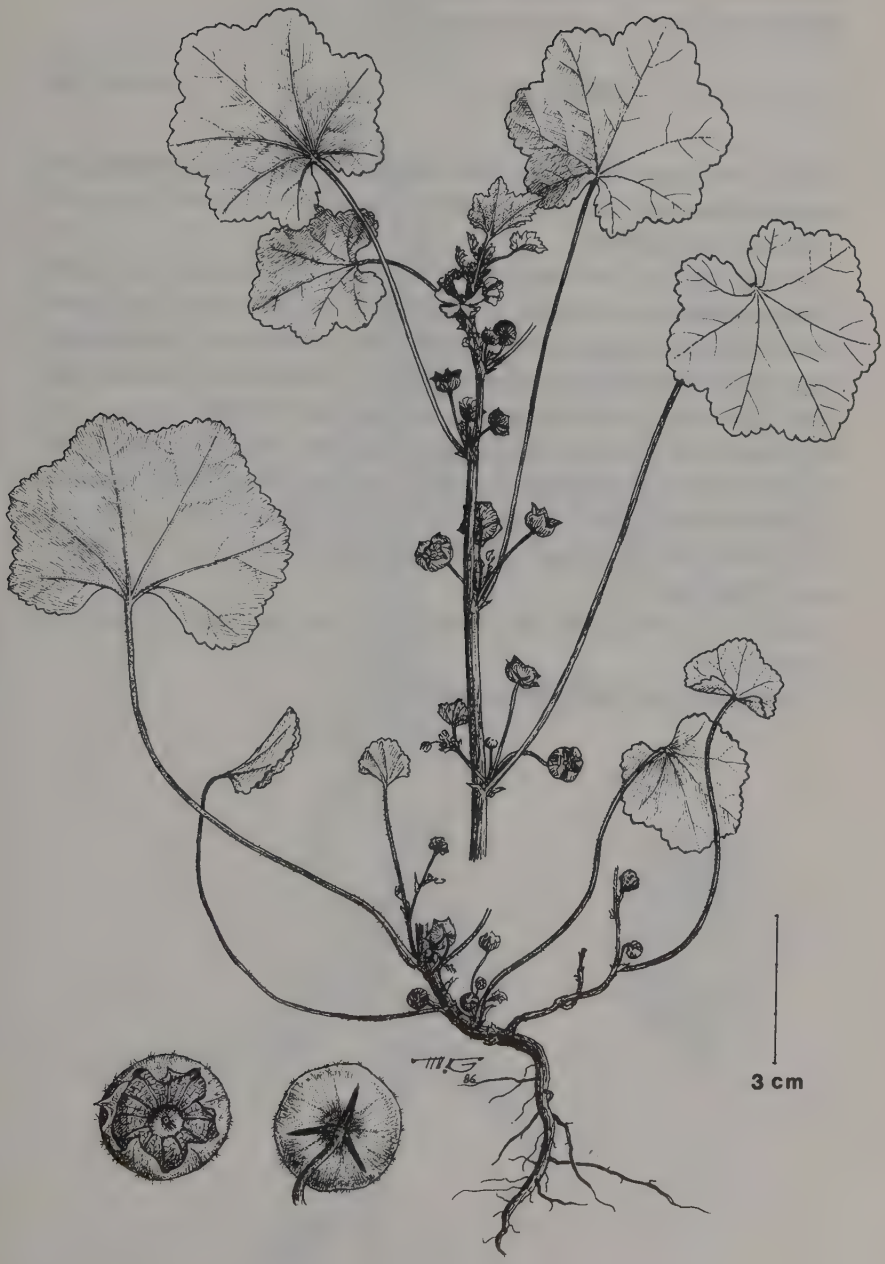
Malva from Greek *malakos* = soothing, probably alluding to the emollient effect of its seeds; *parviflora* = small-flowered.

Annual hairy herb, 10–60(–80) cm; stems erect, ascending or prostrate, much branching; leaves long-petioled, orbicular to palmatifid, margins crenate; flowers 2–5 in small axillary clusters; epicalyx of 3 filiform bracteoles, shorter than the calyx; calyx 4–6 mm, growing in fruit to 10 mm; petals inconspicuous, pinkish or white, slightly exceeding the calyx; fruit schizocarp of numerous mericarps; mericarp brownish, rugulose.

Fields, gardens, orchards, roadsides, waste ground, Nile and canal banks.

Mediterranean, Europe, western Asia.

In folk medicine flowering and fruiting branches are used as a gargle for their astringent properties and also as a bechic (a tonic that controls coughing) and emollient.


3 cm

Sida alba L., Sp. Pl., ed.2, 960 (1763).
Syn. *S. spinosa* L., Sp. Pl., ed.1, 683 (1753), partly.

مُلوخية إبليس *mulūkhiyat iblīs* Prickly sida

Sida = Greek name for a water plant, allusion to this species unclear; *alba* = white, allusion to the whitish aspect of the plant due to the tomentose lower surface of the leaf.

Annual herb, or perennial loosely branched shrublet, to 1 m; young stems herbaceous, old stems and basal parts woody; stipules filiform; leaves alternate, petiolate, elliptic-ovate or ovate-lanceolate, softly white-tomentose on the lower surface, margins crenate-serrate, petiole often with a small spine at the base; inflorescence small axillary clusters, usually shorter than the subtending leaves; flowers yellow, opening in the mornings and closing in the afternoons, epicalyx absent; calyx 5-parted, persistent in fruit; petals 5; capsule 5-carpelled, splitting at the top into 5, 1-seeded parts, each with 2 sharp spreading spines at the top; seeds 3-angled, dark brown.

Fields, roadsides, canal banks; especially frequent during summer in Upper Egypt.

Tropical and southern Africa, America.

3 cm

Glinus lotoides L., Sp. Pl., ed.1, 463 (1753).

غُبَّيرة ، مُغيرة *ghubbayra, mughēra* Hairy glinus

Lotoides = resembling *Lotus*, bird's-foot trefoil.

Annual stellate-hairy herb, 20–60 cm; stems much branching, ascending or prostrate; leaves alternate, but appearing to be in whorls of 3 or 4, petiolate, variable in size and shape, almost orbicular to spathulate; flowers 4–8 mm, in axillary clusters of 3–6, subsessile to short-pedicelled; sepals 5, oblong-ovate; petals absent; petaloid staminodes numerous, greenish white; stamens 10–15, sometimes more, anthers yellow; fruit a many-seeded capsule; seeds numerous, reniform, brown.

Muddy Nile and canal banks.

Tropical, subtropical, and warm temperate regions of the Old World; introduced into America.

Street sellers occasionally use the entire plant as a green soft cover for their vegetables or fruits.

3 cm

Epilobium hirsutum L., Sp. Pl., ed.1, 347 (1753).

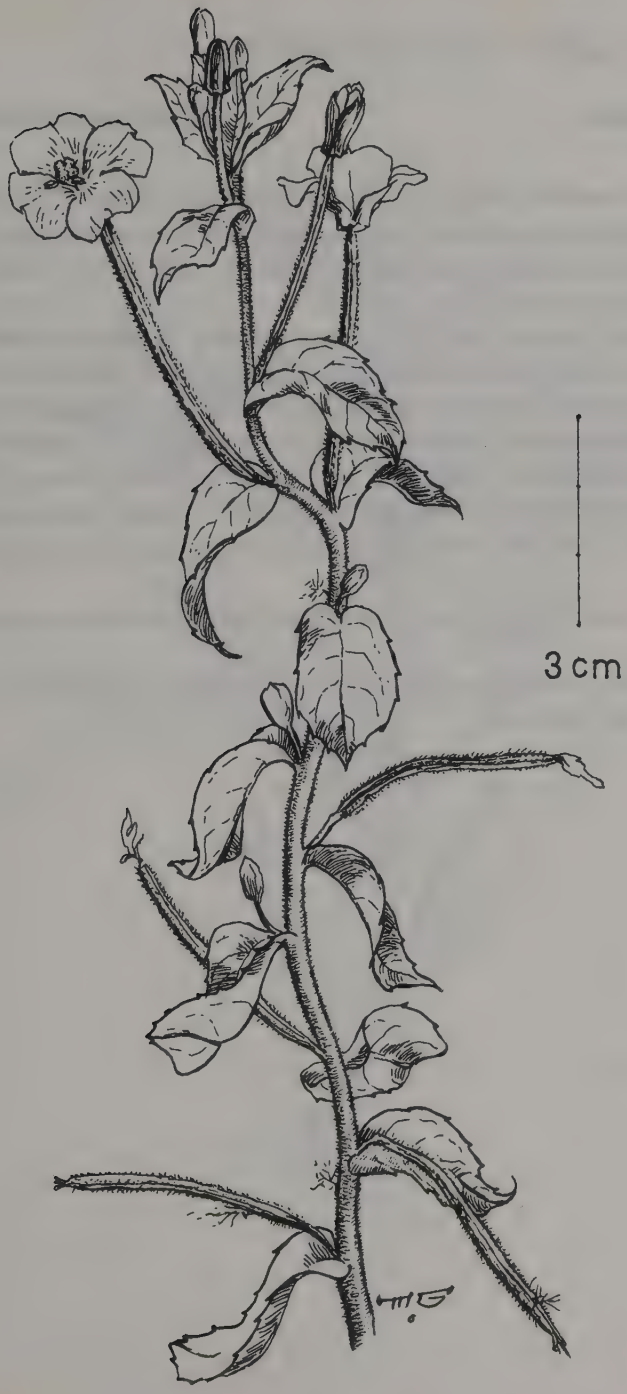
عُلْفة ، سيخ *ᶜalfa, sīkh* Large-flowered willow-herb

Epilobium from Greek *epi* = upon, and *lobos* = a pod, the flowers appearing to be growing on the podlike ovary; *hirsutum* = hairy.

Perennial, rhizomatous, villose herb, to 1.8 m; stems much branching, covered with soft white and short glandular hairs; leaves lanceolate, amplexicaul, opposite toward the base of the stem, alternate at the top shoots, margins serrate; flowers pedicelled, axillary, in leafy terminal branches; hypanthium to 5 cm, densely glandular-hairy; sepals 4, united at the base; petals 4, pink purple, 2-lobed, overlapping; stamens 8, in two whorls, unequal, anthers yellow; ovary 4-locular; capsule 6–8 cm, linear, densely villose; seeds 1.5 mm, numerous, oblong-elliptic, brown.

Canal banks, ditches, moist waste ground.

Mediterranean, Europe, Asia, Africa; introduced and naturalized in many other parts of the world.


3 cm

Jussiaea repens L., Sp. Pl., ed.1, 388 (1753).

مُدّاد *muddād* Creeping waterprimrose

Jussiaea named in honor of Bernard de Jussieu (1699–1777), French botanist whose pioneer work paved the road toward the foundation of the natural system of plant classification; *repens* = creeping and rooting, referring to the stems.

Perennial glabrous herb, 20–80 cm, creeping on moist ground and rooting at nodes, or water plant producing clusters of whitish, inflated, spongy, fusiform floating roots from the nodes; leaves alternate, glossy, petioled, lanceolate or narrowly-lanceolate, entire, to 12 cm; flowers axillary, solitary, peduncled; sepals 4 or 5, 1–1.5 cm; petals yellow, 1.5 cm; stamens 8 or 10; hypanthium cylindrical, style 5–8 mm; capsule almost cylindrical, 2–3.5 cm, tuberculate; seeds in one series in each of the 5 locules.

Canals, canal banks, moist ground near water bodies, ditches, swamps, ponds.

Africa, eastern Mediterranean, India, southeastern United States, Central America, Australia.

3 cm

Orobanche aegyptiaca Pers., Syn. Plant., 2:181 (1807).

هالوك ريحي *hālūk rīhi* Egyptian broomrape

Orobanche from Greek *orobos*, a species of *Vicia*, and *anche* = strangle, as it parasitizes these plants; *aegyptiaca*, of Egyptian origin, probably first discovered in Egypt.

Annual or perennial herbaceous root parasite, 10–50 cm; stems usually branching, glandular-pubescent; leaves reduced to scales, ovate-lanceolate, to 1.2 cm; flowers in lax long spikes, mostly sessile, lower ones sometimes pedicellate; bract lanceolate, usually shorter than the calyx; bracteoles narrow, linear-lanceolate, shorter than the calyx; calyx campanulate, 8–12 mm, 4-lobed; corolla 2–3.5 cm, violet, pubescent, constricted above the ovary and curved outwards below the middle; corolla-tube cylindrical in lower third, expanding and funnel-shaped above; anthers villose; capsule ovoid, tapering at apex, 6–9 mm, ridged.

Fields, gardens, orchards; parasite on different plants, e.g. **Petunia, Solanum, Urospermum, Vicia, Cucumis, Tropaeolum, Brassica, Raphanus, Sinapis**, and others.

Egypt, southwestern Asia: Crimea and Caucasus to Transcaspia and Himalayas.

3 cm

Orobanche crenata Forsskål, Fl. Aegypt.-Arab. LXVIII, 113 (1775).

هالوك مِتابي ، دَكَر الفول *hālūk mitābi, dakar al-fūl*

Scalloped broomrape

Crenata = with crenate edge, allusion to the petals.

Perennial, stout, leafless root-parasite; stems unbranched, fleshy, 20–60 cm high and to 3 cm diameter, glandular hairy, scales lanceolate, to 2.5 cm; inflorescence fleshy dense spike; flowers subtended by glandular-hairy, acuminate bracts; calyx almost as long as the corolla-tube; corolla bell-shaped, 2-lipped, 2–2.5 cm, white or yellowish, with purple veins, corolla-tube not constricted; stamens inserted near the corolla base, filaments woolly at the base, anthers glabrous; fruit many-seeded capsule; seeds minute, brown.

Fields, gardens, orchards; parasite on different plants, especially on leguminous crops.

Mediterranean, western Asia.

3 cm

Orobanche ramosa L., Sp. Pl., ed.1, 633 (1753).

هالوك *hālūk* Branched broomrape

Ramosa = branched, referring to the stem.

Perennial, leafless, root parasite, 10–40 cm; stems branching, erect, swollen at the base, glandular-hairy; scales purplish, ovate-lanceolate; inflorescence loosely branched spikes; flowers subtended by one ovate bract and two linear bracteoles; calyx 4-toothed, calyx teeth acuminate; corolla violet blue, 1.5–2 cm, with a curved tube, constricted above the ovary, 2-lipped; anthers glabrous or sparsely hairy at the base; fruit many-seeded capsule; seeds minute, brown.

Fields, gardens, orchards; parasite mainly on *Solanaceae* plants such as tomatoes, potatoes, eggplants, peppers, petunia.

Mediterranean, central Europe, western Asia.

Orobanche aegyptiaca Pers., Syn. Plant., 2:181 (1807).
A closely related species, differs from **O. ramosa** by its longer flowers (2.5–3.5 cm) and the densely hairy anthers.

3 cm

Oxalis corniculata L., Sp. Pl., ed.1, 435 (1753).

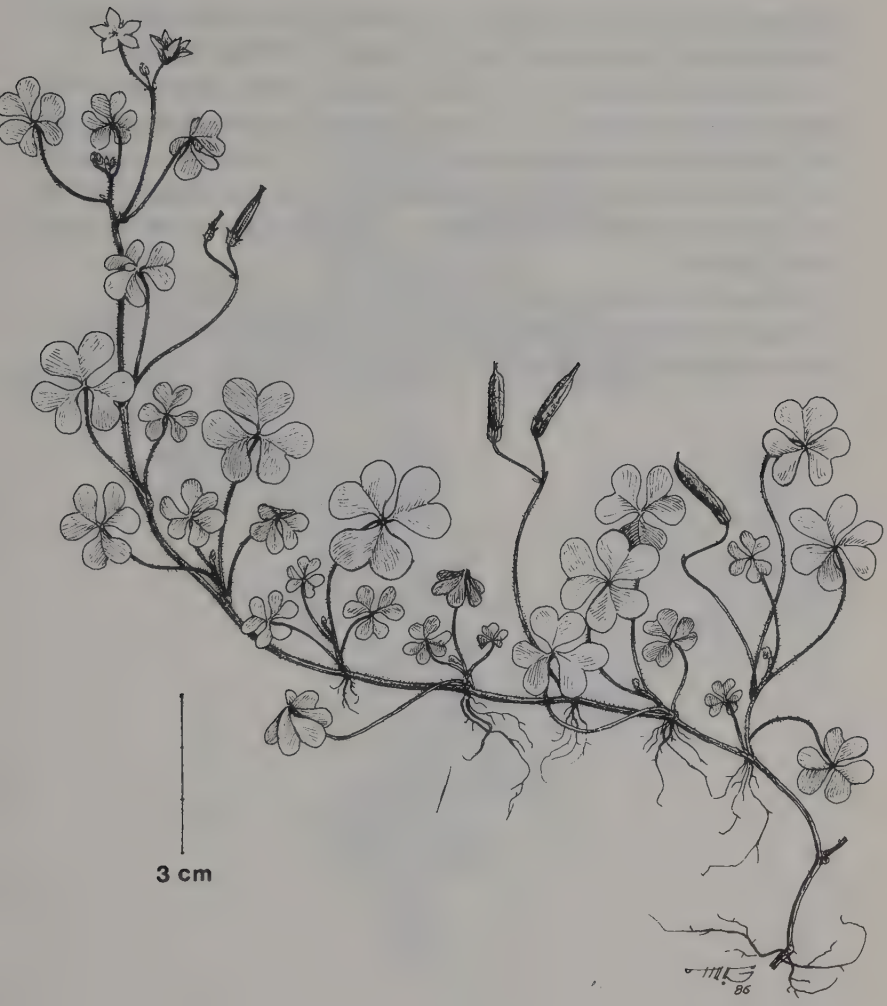
حَمْض *ḥamḍ* Yellow sorrel

Oxalis from Greek *oxis* = acid, alluding to the acidity of the leaves; *corniculata* = bearing small horns.

Annual or perennial herb, 10–40 cm, hairy; stems many, weak, procumbent or ascending, much branching, leafy, rooting at the nodes; leaves alternate, long-petioled, 3-foliate, leaflets obcordate, broader than long, hairy, especially along the margins and on the lower surface; inflorescence umbel-like, 2–4-flowered, axillary, usually longer than the leaves; flowers yellow, stamens 10, stigmas 5; fruit many-seeded, cylindrical, 5-furrowed capsule; seeds ovoid, with transversely wrinkled ridges.

Orchards, gardens, lawns, canal banks, moist and shaded ground.

Widespread in many warm regions of the world.


3 cm

Argemone mexicana L., Sp. Pl., ed.1, 508 (1753).

Mexican poppy, Prickly poppy

Argemone from Greek *argemos* = a white spot or cataract on the eye, which the plant was reputed to cure; *mexicana* = of Mexican origin.

Prickly annual herb, to 1 m, latex yellow, stems much branching; leaves glaucous, sessile, to 30 cm, pinnatisect; margins irregularly serrate, sharply spiny; flowers solitary, axillary, to 5 cm across, subtended by 2 or 3 bracts; sepals prickly, petals yellow to orange, stamens numerous, stigmas 4; capsule many-seeded, ellipsoid, spiny; seeds brownish black, globose.

Nile and canal banks, especially in Upper Egypt.

Central America, southwestern United States; introduced and naturalized in most tropical and subtropical regions of the world.

3 cm

Plantago lagopus L., Sp. Pl., ed.1, 114 (1753).

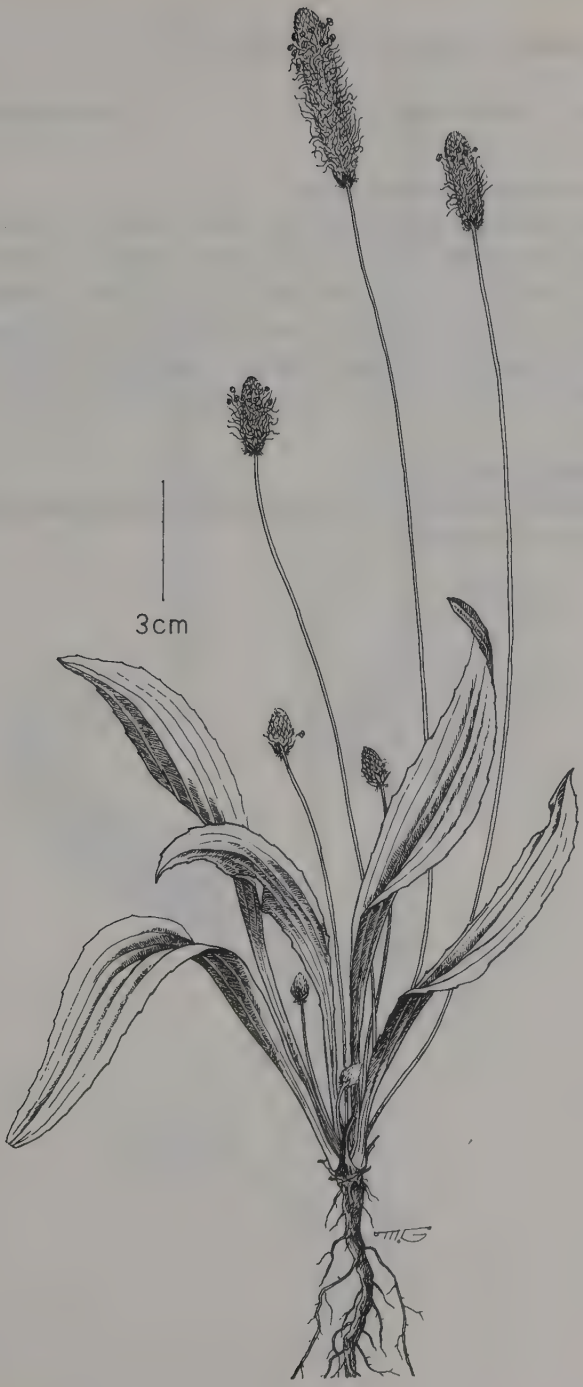
وِدنة *widna* Round-headed plantain

Plantago = the Latin word for this group of plants; *lagopus* = covered with long hairs, referring to the inflorescence.

Annual herb, stemless; leaves rosetted, lanceolate, 3–5-parallel-veined, remotely dentate toward the apex; inflorescence dense spikes, on scapes much longer than the leaves; immature spikes almost spherical, densely woolly; mature spikes hairy, cylindrical; flowers subtended by ovate-lanceolate membranous bracts, calyx-lobes and bracts villous; corolla-lobes acuminate; capsule 2.5 mm, 2-seeded; seeds narrowly elliptic, 1.5 mm long, brownish, glossy.

Fields, canal banks.

Mediterranean, western Asia.


3cm

Plantago major L., Sp. Pl., ed.1, 112 (1753).

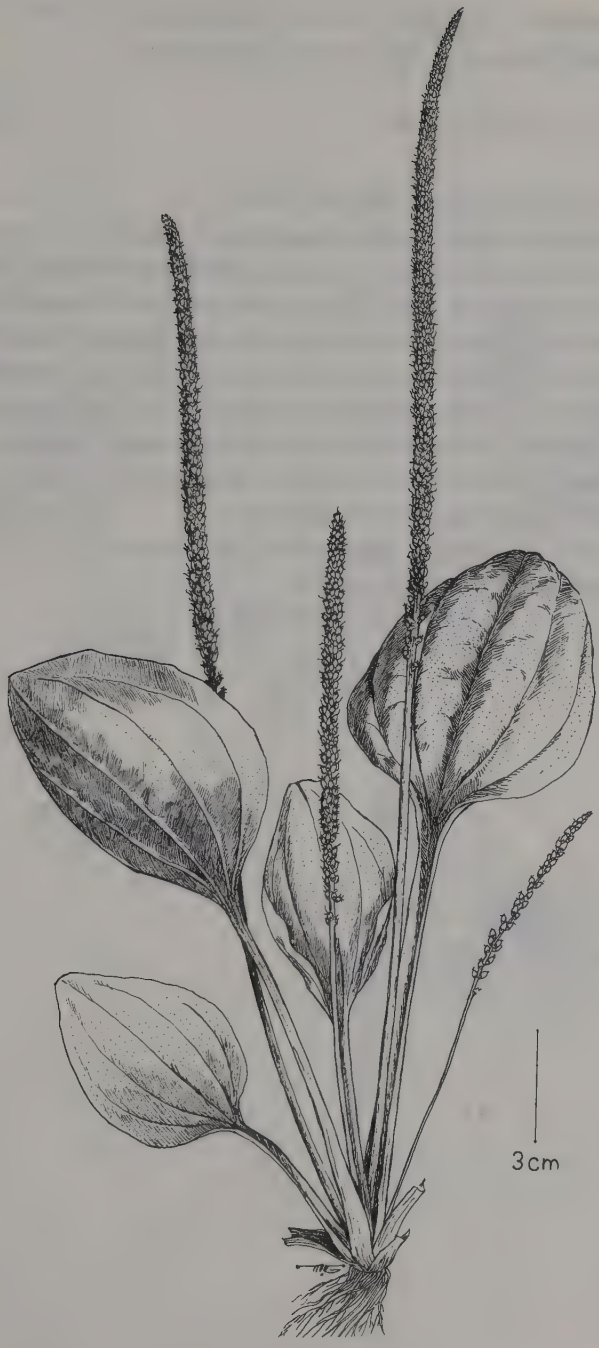
لِسان الحَمَل *lisān al-ḥamal* Broad-leaved plantain

Major = larger than the normal type.

Perennial glabrous herb, to 80 cm; with a vertical rhizome; leaves rosetted, to 40 cm long, broadly ovate, margins entire, 3–7-nerved, petioles long; scapes longer or shorter than the leaves; spikes cylindrical, 5–30 cm or more, dense in the upper part, lax below; bracts ovate; calyx-lobes equal, broadly ovate, membranous, with a green midrib; corolla-lobes ovate-lanceolate; capsule ellipsoid; seeds 10–30, minute, angled, brownish.

Canal banks, moist ground.

Mediterranean, Europe, western Asia; naturalized elsewhere in the temperate regions of the world.


3cm

Emex spinosa (L.) Campd., Monogr. Rumex, 58, t.1 (1819).
Syn. *Rumex spinosus* L., Sp. Pl., ed.1, 337 (1753).

ضِرس العجوز *ḍirs al-ᶜagūz* Prickly dock

Spinosa = spiny, allusion to the spiny fruit.

Annual glabrous herb, 5–30 cm; stems much branching especially from the base, often reddish, erect or decumbent; leaves alternate, petiolate, deltoid to ovate-oblong, entire; flowers clustered at the nodes, or in leafless interrupted racemes; lower whorls of sessile pistillate flowers, upper staminate flowers clustered on filiform pedicels with some perfect ones; perianth urn-shaped, growing and hardening in fruit, with spiny recurved apex; fruit achene, enclosed in the spiny perianth; aerial fruits more spiny and smaller than the subterranean larger and less spiny ones which are crowded at the upper end of the fleshy root.

Fields, orchards, gardens, waste ground, canal banks.

Mediterranean, Sahara, western Asia.

3 cm

Polygonum equisetiforme Sm. in Sibth. & Sm., Fl. Graec. Prodr. 1:266 (1809).

قُرضاب *qurḍāb* Horsetail knotgrass

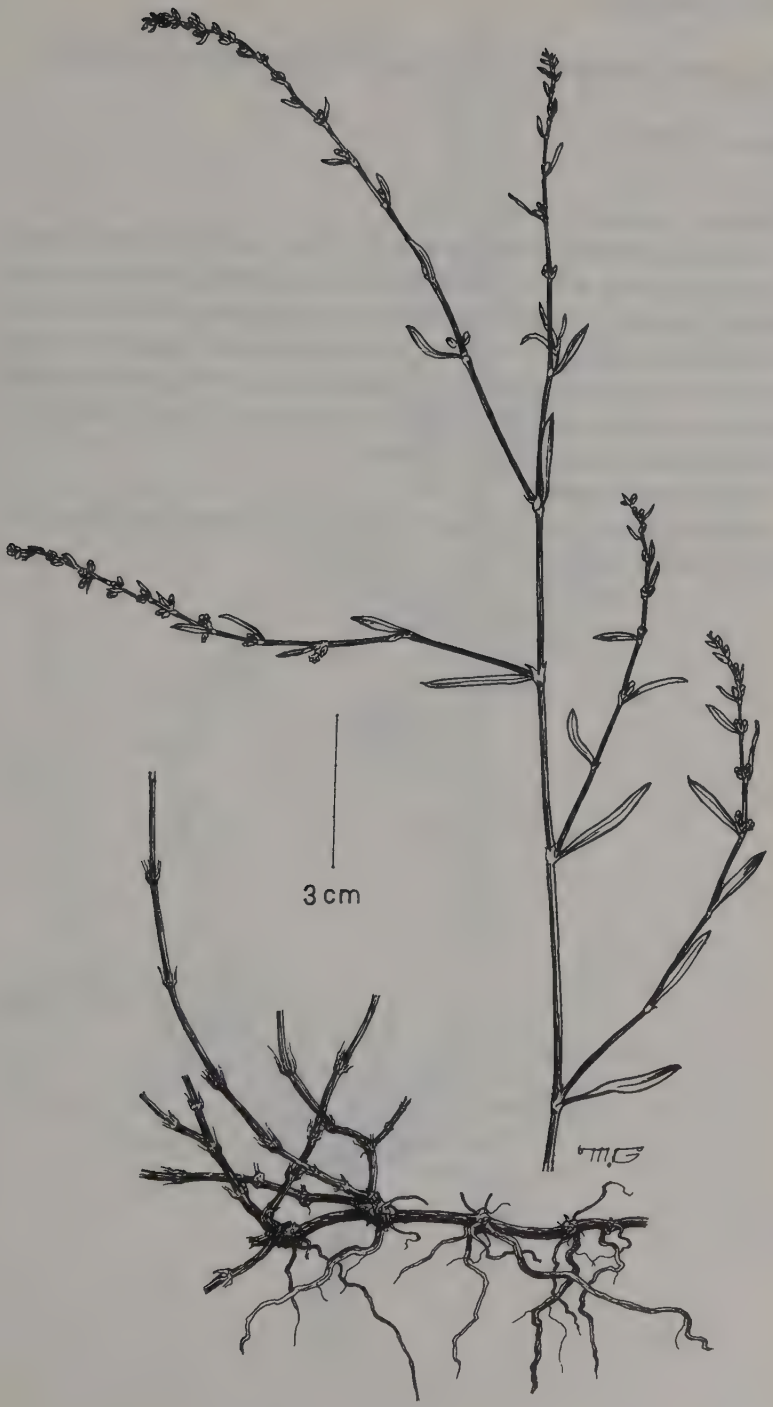
Polygonum from Greek *polys* = many, and *gony* = knee joint, in allusion to the many swollen joints of the stem in these plants; *equisetiforme* = resembling *Equisetum*, the horsetail plants.

Perennial glabrous herb, 20–80 cm; stems richly branching, woody at the base, procumbent, often ascending, rarely erect; leaves alternate, sessile, deciduous on old branches, oblong-lanceolate, entire; ochreae hyaline, white above, brownish below; flowers in loosely interrupted axillary clusters, forming long lax terminal spikes; bracts as long as or longer than the flowers; perianth white or pink, enclosing the achene, style 2–3-fid; fruit glossy, brownish, ovoid, 2.5 mm.

Waste ground, roadsides, field borders, canal banks.

Mediterranean, western Asia.

According to Zohary (1966), the plant is eaten by goats.


3 cm

Polygonum plebeium R. Br., Prodr. Fl. Nov. Holl., 420 (1810).

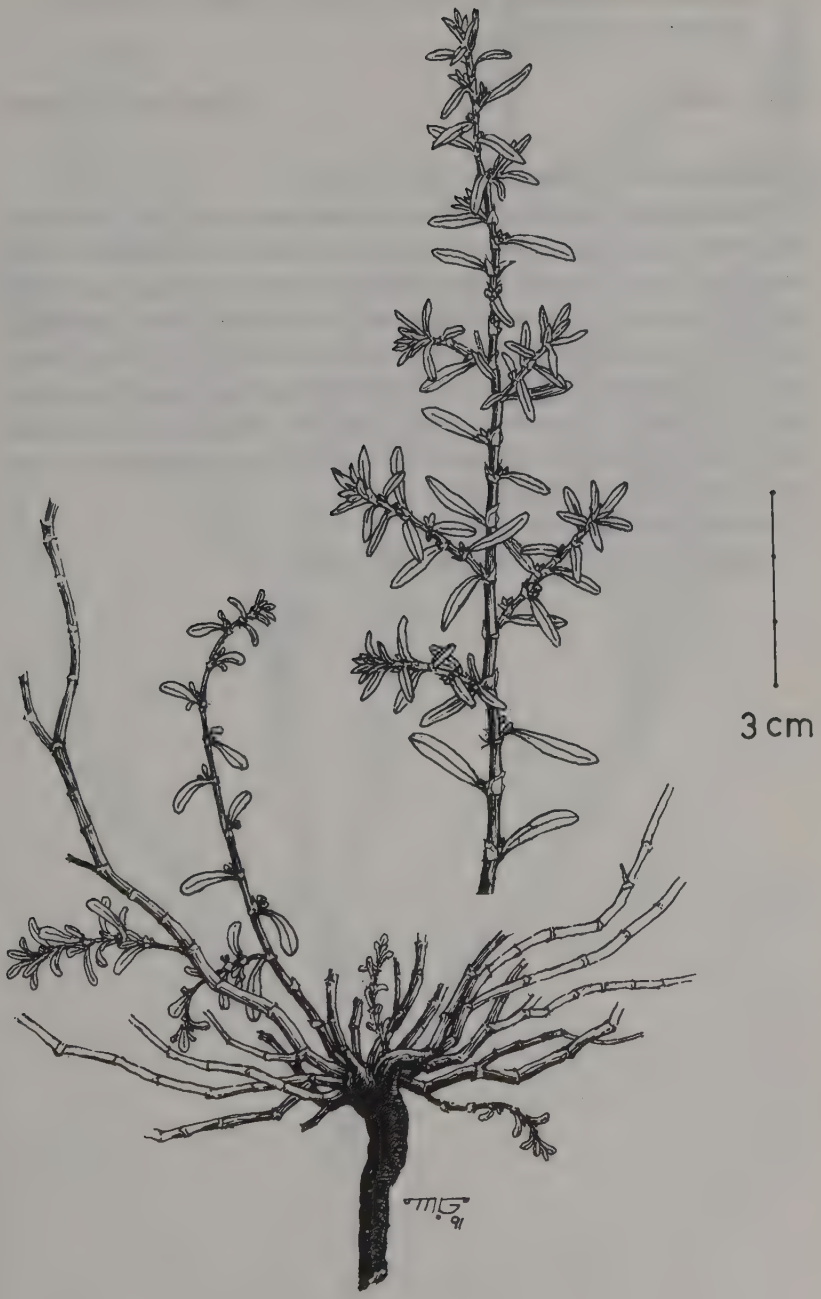
قوطّية *qūṭṭiya*

Plebeium = common.

Annual or perennial glabrous herb, 10–30 cm; stems prostrate, branching, leafy, woody at the base in perennial specimens; ochreae silvery, veined, laciniate; leaves small, almost of similar size, to 1.5 cm, linear to narrow-elliptic, rather leathery, midrib prominent, margins revolute; flowers in axillary clusters of 1–3, rarely more, forming together short leafy inflorescence; perianth greenish, 2 mm; styles 3, free, 3 mm; nut 2 mm, trigonous, smooth, black, shining.

Nile and canal banks.

Eastern Asia and Australia; most probably introduced into Egypt, Sudan, and eastern Africa.


3 cm

Polygonum salicifolium Brouss. ex Willd., Enum. Plant. Hort. Reg. Berol., 428 (1809).

زَلْفة *zalfa* Willow-leaved knotweed

Salicifolium = with leaves like *Salix*, willow.

Perennial glabrous herb, 20–80 cm; stems branching, erect or ascending, rarely decumbent, often rooting at the nodes; leaves sessile or subsessile, narrowly lanceolate, attenuated at the base, margins entire or obscurely serrulate, apex acuminate; ochreae 2–3 cm, membranous, brownish, veined, sparingly bristly hairy, fringed at the apex; inflorescence spike-like, leafless, many-flowered; flowers short-pedicelled, in clusters of 2–5 together; perianth segments 5, pink or white, about 2 mm; stamens 5–8, style 3-fid; fruit trigonous, smooth, dark brown, shining nut, 2.5 mm, included in the perianth.

Nile and canal banks, in shallow water.

Tropical and subtropical regions of the world.

3 cm

Polygonum senegalense Meissn., Monog. Polygon. 54 (1826).

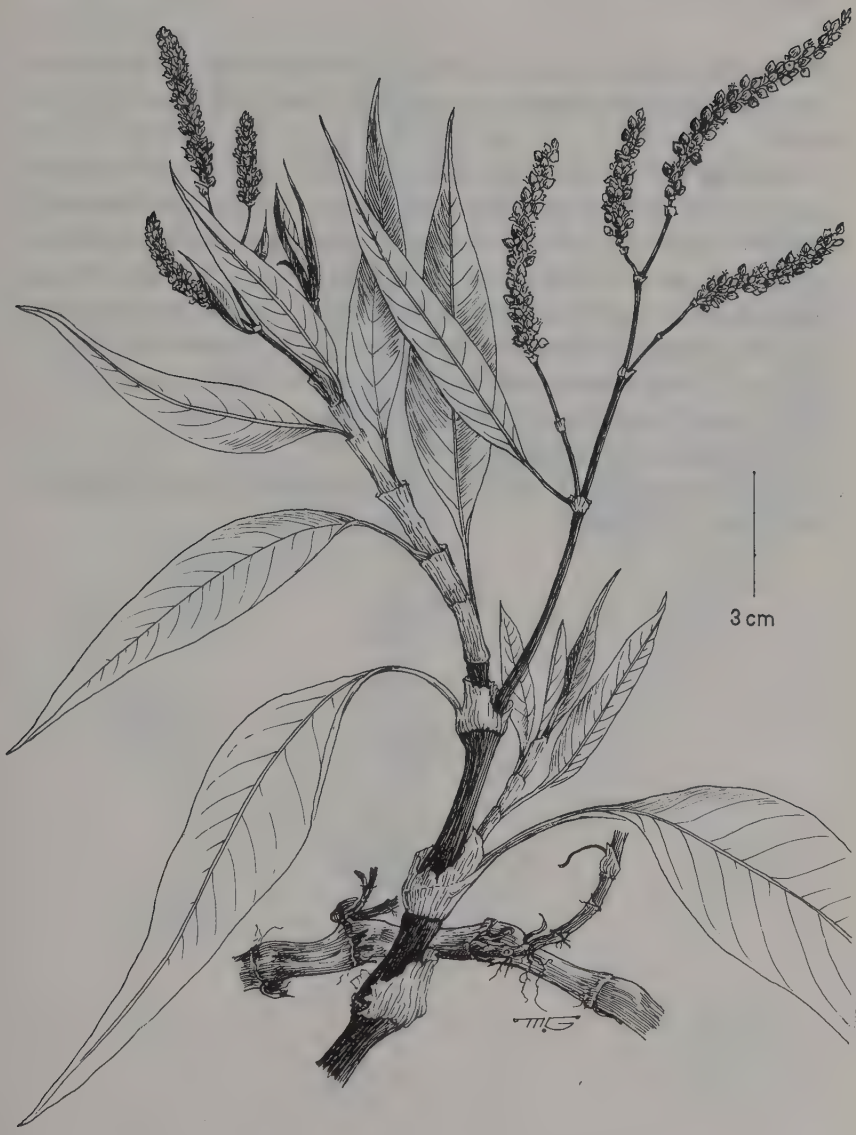
حَبَق البحر *ḥabaq al-baḥr*

Senegalense = from the banks of the river Senegal in West Africa.

Perennial, erect, robust herb, to 1.5 m or more; stems much branching, rooting at the nodes, glabrous or densely white-tomentose; leaves large, to 25 cm, petiolate, glabrous or white-tomentose, lanceolate, apex acuminate, margins entire; ochreae to 3.5 cm, membranous, reddish brown, glabrous or white-tomentose; inflorescence densely covered with flowers, leafless, branched panicle; flowers pedicelled, pedicels covered with orange glands which exude a yellow liquid by applying pressure; bracts ovate; perianth segments 4, pink, greenish, or white, glandular; fruit lens-shaped, blackish, shining nut.

Nile and major canal banks, often with thick growth.

Egypt, tropical and southern Africa, Madagascar.


3 cm

Rumex dentatus L., Mant. Alt., 226 (1771).

حُمَّيض *ḥummēḍ* Dentated dock

Rumex from *rumo* = to suck, alluding to the Roman habit of sucking the leaves to allay thirst; *dentatus* = toothed, like saw teeth, referring to the fruits.

Annual herb, 30–80 cm, glabrous; stems erect, simple or often branching; basal leaves to 20 cm, ovate-oblong, flat or crisped at the margins, petiole as long as or shorter than the blade; upper leaves becoming smaller and narrower, short-petioled, slightly crisped to entire; inflorescence simple or slightly branched, many-whorled, whorls many-flowered, all whorls subtended by narrowly-lanceolate leaves; perianth lobes 6, in 2 rows armed with subulate teeth; stamens 6, inserted at the base of the perianth; styles 3; nut trigonous, brown, 2.5 mm.

Fields, canal banks, moist ground.

Mediterranean, Europe, Asia, extending to some subtropical and tropical regions of the world.

3 cm

Portulaca oleracea L., Sp. Pl., ed.1, 445 (1753).

رجلة *rigla* Purslane

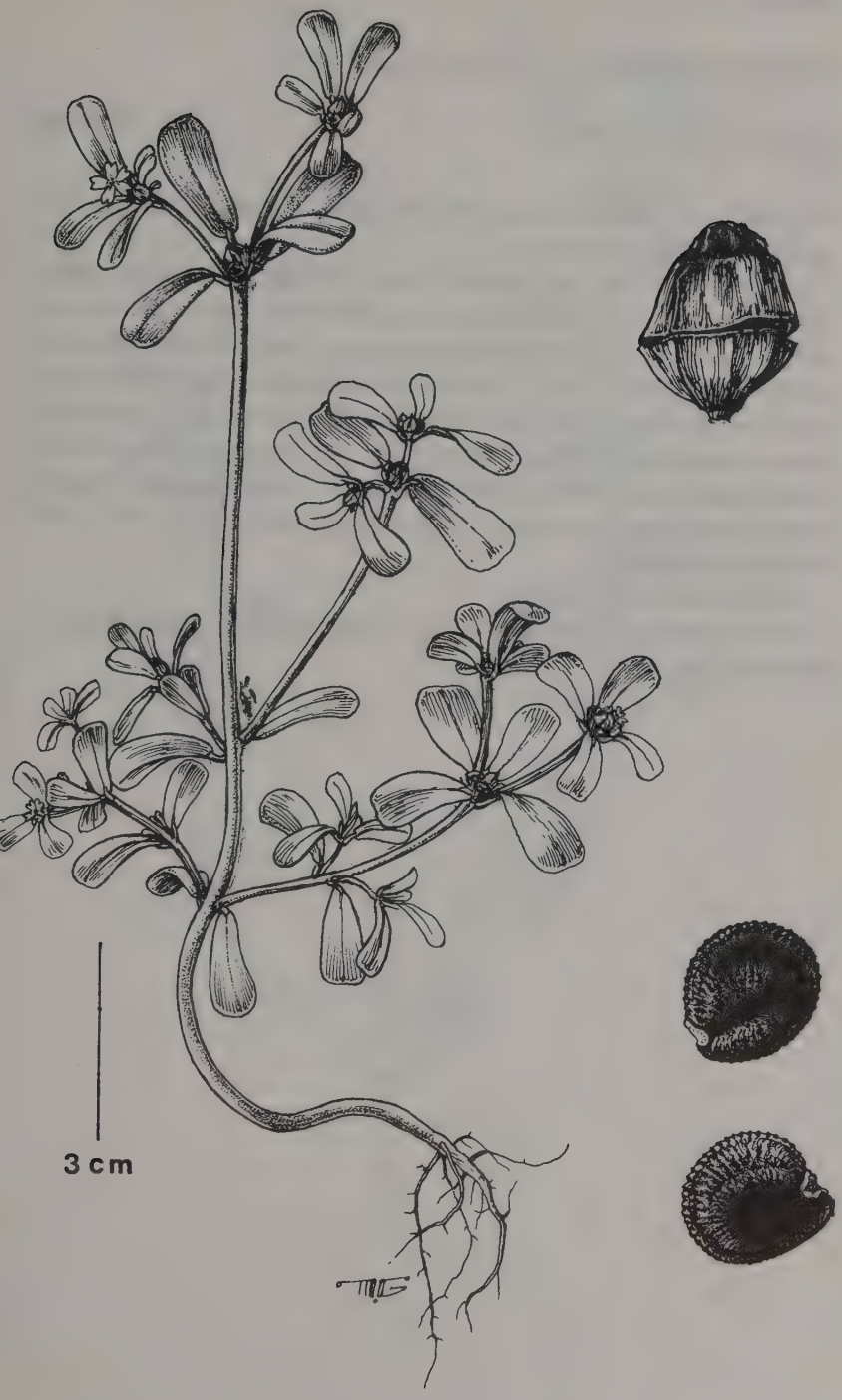
Portulaca old Latin name, possibly from *porto* = to carry, and *lac* = milk, alluding to the milky juice of the plant.

Annual, prostrate, glabrous, succulent herb, 15–50 cm; stems richly branching, fleshy, leafy, brittle; leaves subopposite and crowded below the flowers, alternate on the lower part of the stem, sessile, fleshy, deltoid to oblong-obovate, entire; flowers sessile, in dense clusters; sepals unequal, joined into a short tube at the base; petals yellow, slightly joined, longer than the sepals; stamens 7–15; fruit lid-capsule, unilocular, thin-walled; seeds reniform, tuberculate, black.

Gardens, orchards, fields, waste ground.

Cosmopolitan weed, especially in warm temperate regions.

The plant is used as a vegetable and salad. In folk medicine, the cataplasm of fresh leaves is used for maturing abscesses. The whole plant is an emollient, calmative, diuretic, vermifuge, and refreshing agent.


3 cm

PRIMULACEAE

Anagallis arvensis L., Sp. Pl., ed.1, 148 (1753).

عين الجمل *ᶜayn al-gamal* Pimpernel

Anagallis from Greek word meaning delightful; *arvensis* = growing in or pertaining to cultivated fields.

Annual herb, 10–40 cm, glabrous; stems procumbent, 4-angled, much branching; leaves opposite, sessile, ovate-lanceolate, with glandular spots on both surfaces, margins entire and scarious; flowers in the axils of upper leaves; pedicels to 4 cm, recurved in fruit; calyx lobes connate at the base; corolla blue or scarlet red, petals dentate or entire, glandular-ciliate; glands numerous, 3-celled, the terminal cell globose; stamens with bearded filaments; fruit a globular lid-capsule, seeds papillose. A multiform species, known in several forms of which some are described as varieties or subspecies.

Fields, gardens, orchards.

Mediterranean, Europe, western Asia; introduced into many temperate regions of the world.

3 cm
86

Ranunculus sceleratus L., Sp. Pl., ed.1, 551 (1753).

زَغْلِيل *zaghlīl* Marsh crowfoot

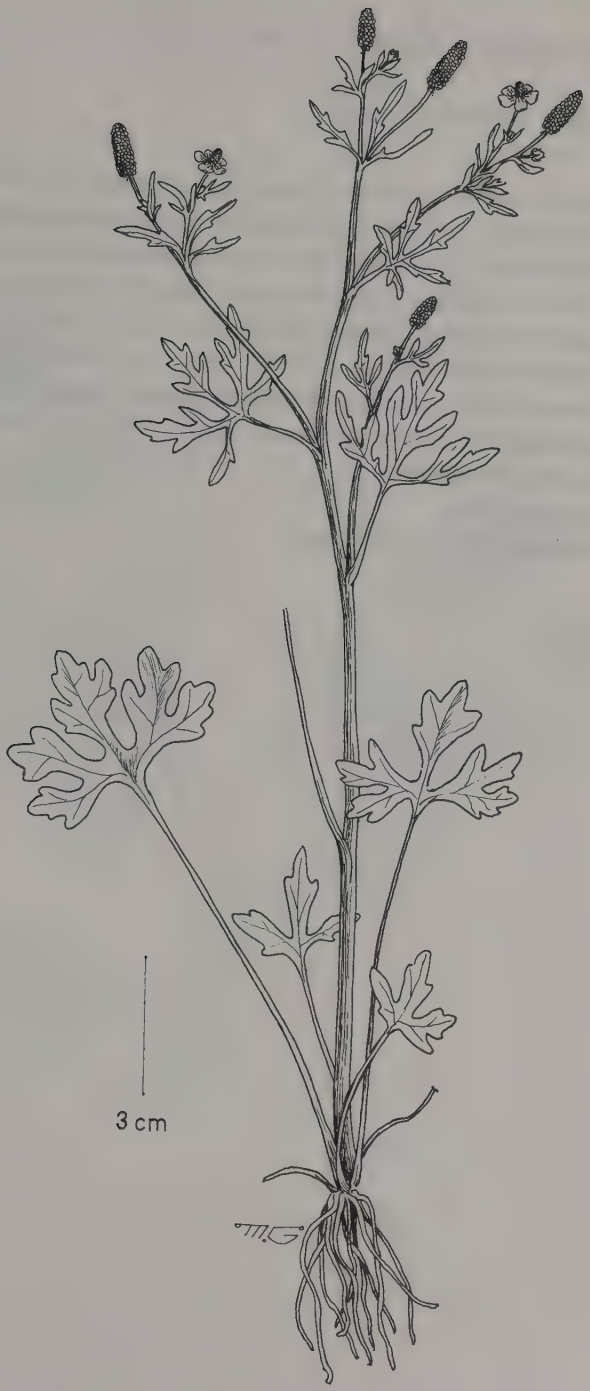
Ranunculus from diminutive of *rana* = a frog, as many species grow in damp places; *sceleratus* = bitterly pungent, alluding to the taste of the plant.

Annual herb, 20–60 cm; stems erect, branching, glabrous, hollow, furrowed; lower leaves long-petioled, uppermost sessile, all leaves palmately 3-lobed; lateral lobes often 2–3-lobed, segment entire; flowers pedicelled, numerous, pale yellow; sepals 5, deflexed; petals 5, slightly longer than the sepals; receptacle much elongated in fruit; achenes 1 mm, ovoid, glabrous, slightly rugose, short-beaked.

Canals, ditches, swamps, moist ground.

Mediterranean, Europe, western Asia.

A tincture from fresh plants is used in the treatment of skin conditions, e.g., herpes, eczema, pruritus, and rheumatic conditions such as sciatica, arthritis, and rhinitis.


3 cm

Potentilla supina L., Sp. Pl., ed.1, 497 (1753).

حشيشة الوز *ḥashīshat al-wizz* Cinquefoil

Potentilla from *potens* = powerful, as some species are reputed for their medicinal properties; *supina* = prostrate, describing the habit of the plant.

Annual herb, to 35 cm; stems decumbent or ascending, much branching from the base; almost glabrous above, tomentose-glandular above; leaves petiolate, pilose to densely white-tomentose; pinnately 5-foliate; leaflets ovate-elliptic, dentate; flowers numerous, solitary, long-pedicelled, borne opposite to the leaves; sepals triangular; epicalyx segments ovate-lanceolate, longer than the sepals; petals yellow, shorter than the sepals; achenes densely hairy.

Nile and canal banks.

Mediterranean, Nile basin, Europe.

3 cm

Antirrhinum orontium L., Sp. Pl., ed.1, 617 (1753).
Syn. *Misopates orontium* (L.) Rafin., Autikon Botanikon 158 (1840).

سَيسم *saysam* Snapdragon, Calf's snout

Antirrhinum from Greek *anti* = resembling, and *rhis* (rhinos) = a snout, alluding to the shape of the flower; *orontium* probably from Greek *oros* = mountain or hill, alluding to the calcifuge habit of the plant, often growing on hilly limestone in Europe.

Annual herb, 15–60 cm, almost glabrous, otherwise slightly glandular hairy above; stems erect, simple or sometimes branching; leaves sessile to short-petioled, opposite below and alternate above, linear to narrow-lanceolate; flowers in lax racemes, short-pedicelled; calyx pilose; calyx lobes unequal, narrowly-linear; corolla mauve; fruit pore-capsule, densely glandular-hairy; seeds numerous, reticulate-rugose.

Gardens, orchards, fields.

Mediterranean, Europe, western and central Asia.

3 cm

Veronica anagallis-aquatica L., Sp. Pl., ed.1, 12 (1753).

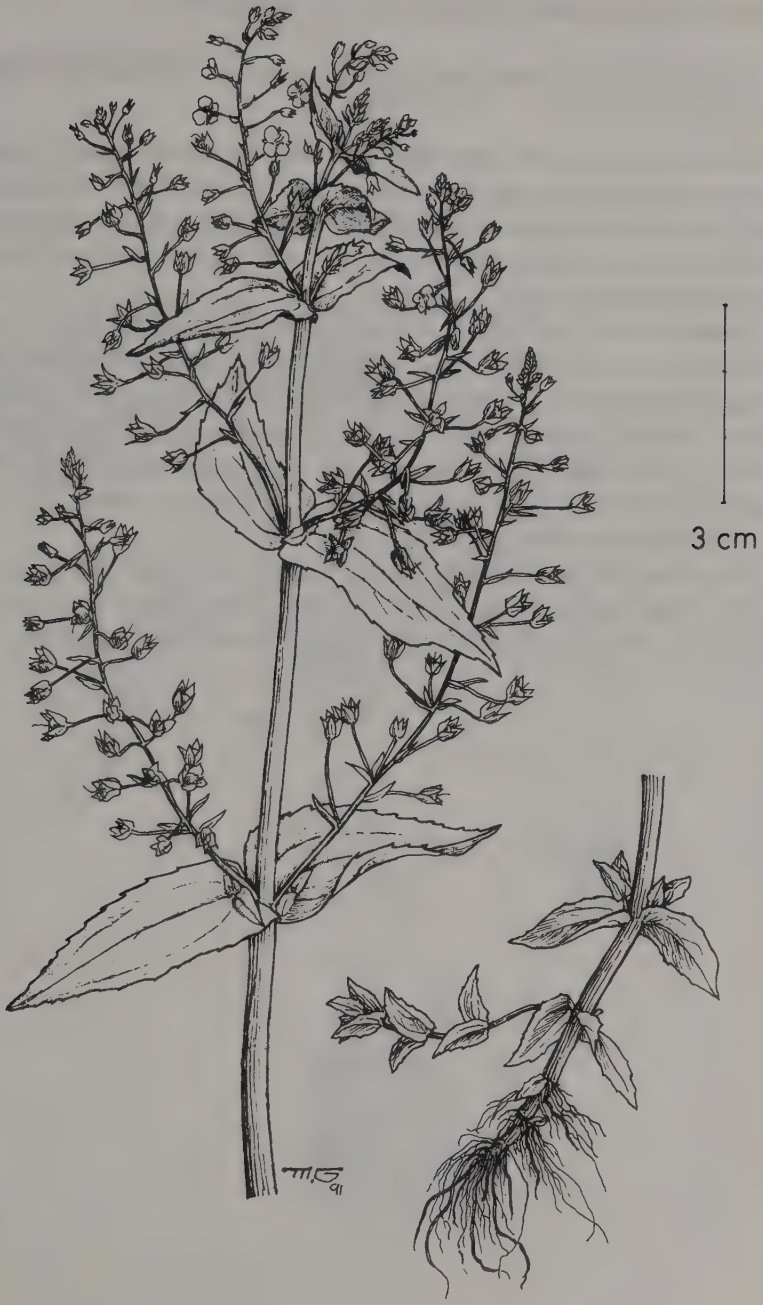
حَبَق *ḥabaq* Long-leaved water speedwell, Water pimpernel

Veronica named after St. Veronica; *anagallis-aquatica*, *anagallis* = delightful, and *aquatica* = living in water, alluding to its habit.

Perennial herb, 20–60 cm, almost glabrous, upper parts sometimes glandular-hairy; rhizome rooting; stems erect, angular; leaves sessile, broadly-lanceolate to ovate, entire or obscurely serrate; inflorescence axillary opposite racemes; flowers pedicelled; calyx-lobes ovate, apex acute; corolla pale to pinkish blue; stamens 2; capsule 3 mm, almost rounded, glabrous, shorter than the calyx; seeds many, compressed.

Canal banks, moist ground near wells and springs.

Widespread in temperate and cold regions of the world.


3 cm

Datura innoxia Mill., Gard. Dict., ed.8, No.5 (1768).

داتورة ، طاطورة *dātūra, ṭāṭūra* Downy thorn apple

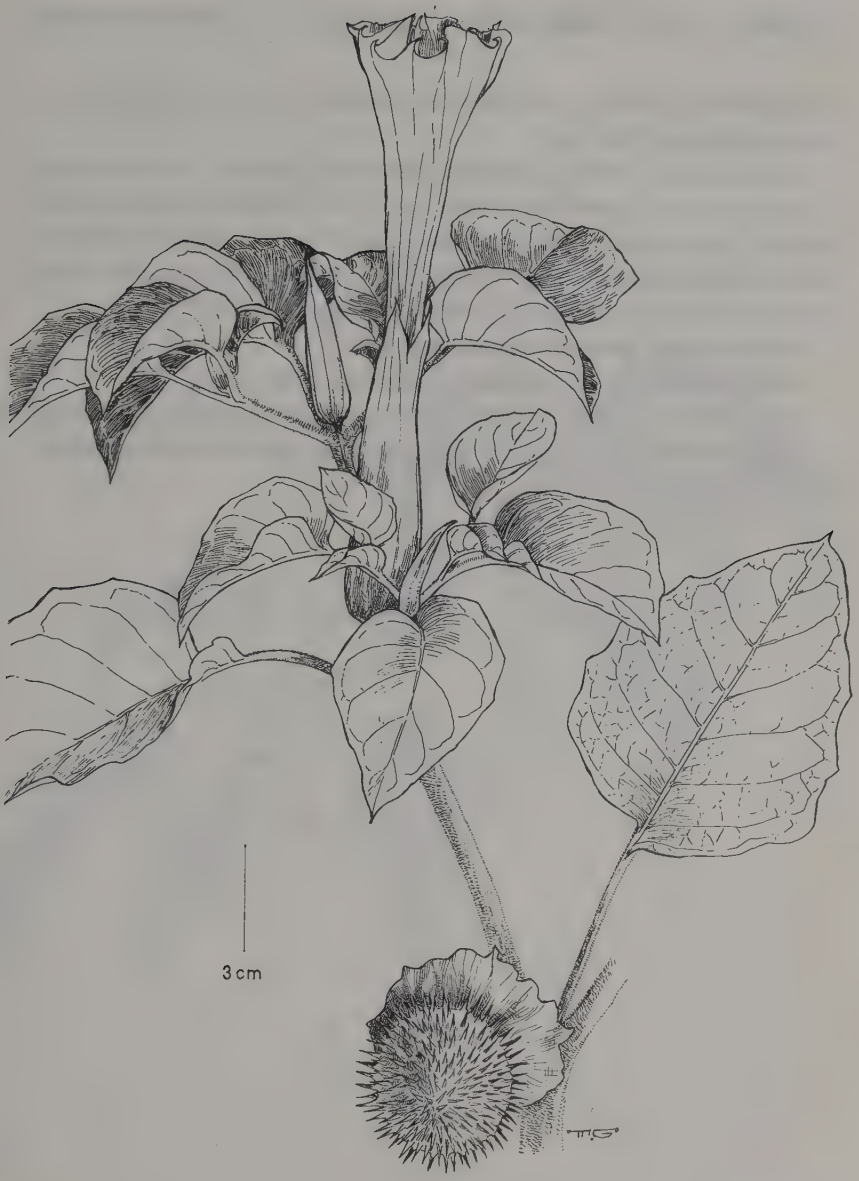
Datura = the vernacular East Indian word for the plant; *innoxia* = harmless, or lacking poisonous properties (in fact the plant is toxic; however, we are unable to change the scientific name even though it is inappropriate as long as it is published in accordance with the International Code of Botanical Nomenclature).

Annual herb, 30–120 cm, densely pubescent-grayish; stems much branched, angular; leaves long-petioled, densely pubescent on both surfaces, broadly ovate, entire, acute, blade assymetric at the base; flowers large, trumpet-shaped; calyx 8–10 cm, calyx-lobes unequal; corolla white, 15–20 cm, 10-toothed; capsule pendulous, globose, densely spiny; seeds numerous, reniform, light brown, minutely pitted.

Cultivated and waste ground.

Southwestern United States, Mexico; introduced into the Old World.

The plant is poisonous. Even the sucking of the nectar by a child is said to have resulted in poisoning (Watt and Breyer-Brandwijk 1962).


3 cm

Datura stramonium L., Sp. Pl., ed.1, 179 (1753).

داتورة ، طاطورة *dātūra, ṭāṭūra* Jimson weed, Common thorn apple

Stramonium probably a corruption of *straminium* = straw yellow, alluding to the color of the stem.

Annual herb, 20–80(–120) cm, glabrous, glaucous; stems smooth, cylindrical, much branching above; leaves long-petioled, ovate, coarsely dentate, acute to acuminate; flowers erect, 6–10 cm, calyx 3.5–4.5 cm, calyx-lobes acuminate; corolla white, about twice the length of the calyx; fruit 4-valved spiny capsule; seeds many, reniform, black.

Waste ground, roadsides, orchards, fields.

North America; widely naturalized throughout the world.

The plant is toxic. A tincture of leaves is prescribed for spasmodic coughs and asthma. The leaves are used in fumigations and in cigarettes to ease asthma attacks.

153
3 cm

Solanum nigrum L., Sp. Pl., ed.1, 186 (1753).

عِنب الديب *ᶜinab al-dīb* Black nightshade

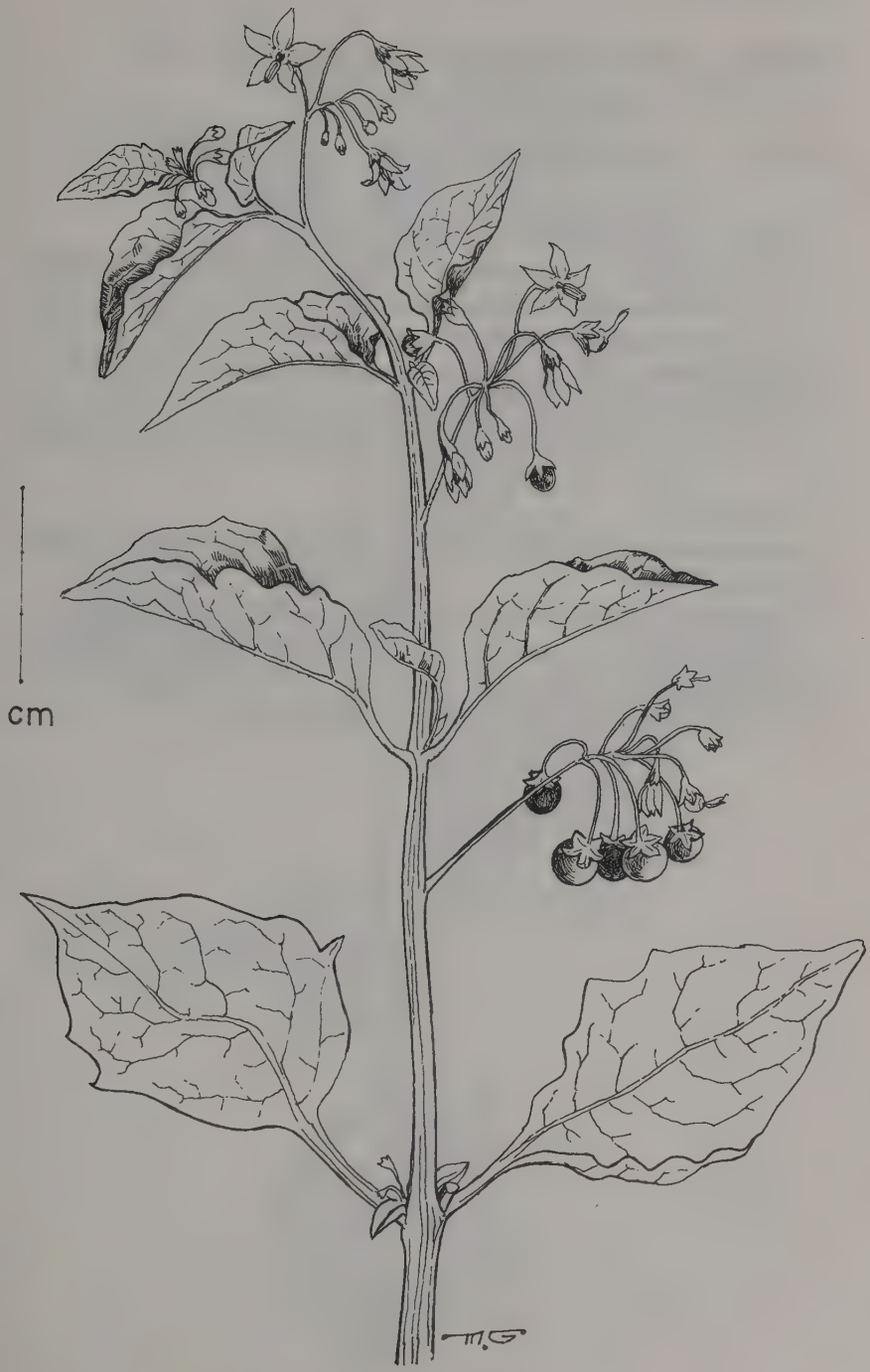
Solanum is the old name given by Pliny, the Roman naturalist, possibly derived from Latin *solamen* = solace or comfort, alluding to its calmative properties; *nigrum* = black, referring to the color of the fruit.

Annual herb, 20–80(–120) cm, glabrous to villous; stems much branching, erect or decumbent; leaves dark green, ovate to ovate-rhombic, entire or irregularly dentate; inflorescence lateral lax cymes, 4–10-flowered, on 3–5 cm long peduncles; flowers white, with yellow central anthers; pedicels longer than the flowers, recurved in fruit; calyx-lobes ovate, adhering to the base of the fruit; corolla 2–3 times longer than the calyx; fruit a more or less spherical berry, green, getting black upon maturity; seeds many, reniform, compressed. A very variable species, six varieties are known from Egypt (cf. Täckholm 1974).

Fields, orchards, gardens, canal banks, waste ground.

Cosmopolitan.

According to Ivens (1975), the fruits are reported to be poisonous if eaten by children, especially when unripe. The foliage is also harmful if grazed by livestock. According to Boulos (1983), the cataplasm of the entire plant is used as a calmative and as an emollient for burns and dermal afflictions. A decoction of the plant is used as a wash for burnt parts and vaginal injection. The berries are narcotic, analgesic if used externally.


cm
M.G

Withania somnifera (L.) Dunal in DC., Prodr. 13:453 (1852).
Syn. *Physalis somnifera* L., Sp. Pl., ed.1, 182 (1753).

مُرجان ، سِمْ فراخ *murgān, simm farākh* Clustered withania

Somnifera = sleep-producing, referring to its narcotic effect.

Shrub to 1.5 m, stellate-tomentose; stems much branching, cylindrical, woody at the base; leaves petioled, ovate, entire, acute, base asymmetric; flowers in dense axillary cymes, short-petioled; calyx campanulate, lobes triangular; fruiting calyx inflated, membranous; corolla greenish yellow, tomentose, narrowly campanulate, slightly longer than the calyx (in flower); fruit a bright red, many-seeded berry, enclosed in the persistent calyx.

Waste ground.

Mediterranean, western Asia to India, tropical and subtropical regions of the Old World.

The plant is a narcotic and anti-epileptic. It is used for stomachaches, ulcers, and colds. The roots are calmative and used in the treatment of rheumatic pains. The leaves and fruits are febrifuge, diuretic, and antirheumatic. The seeds are toxic, emetic, and anesthetic.

3 cm

Corchorus olitorius L., Sp. Pl., ed.1, 529 (1753).

مُلوخية *mulūkhiya* Malta jute, Jews' mallow

Corchorus from Greek *korchoros*, a word of obscure derivation; *olitorius* = of domestic use.

Annual herb, 20–80(–120) cm, glabrous; stems erect or ascending, branching; leaves stipulate, long-petioled, narrowly-ovate to oblanceolate, margins serrate, the two lower teeth with long aristae; flowers solitary or 2–3 on short peduncles, opposite the leaves; sepals 5, as long as or shorter than the petals, mucronate; petals 5, yellow, about 1 cm long, spathulate; fruit 6–10x0.5 cm, cylindrical 5-valved capsule, glabrous, 10-angled; seeds many, angular, greenish black.

Fields, roadsides, often escape from cultivation.

Tropical and subtropical regions of the Old World.

This is a popular pot herb in Egypt, especially during summertime. In some other countries it is an important source of jute fiber.

3 cm

Ammi majus L., Sp. Pl., ed.1, 243 (1753).

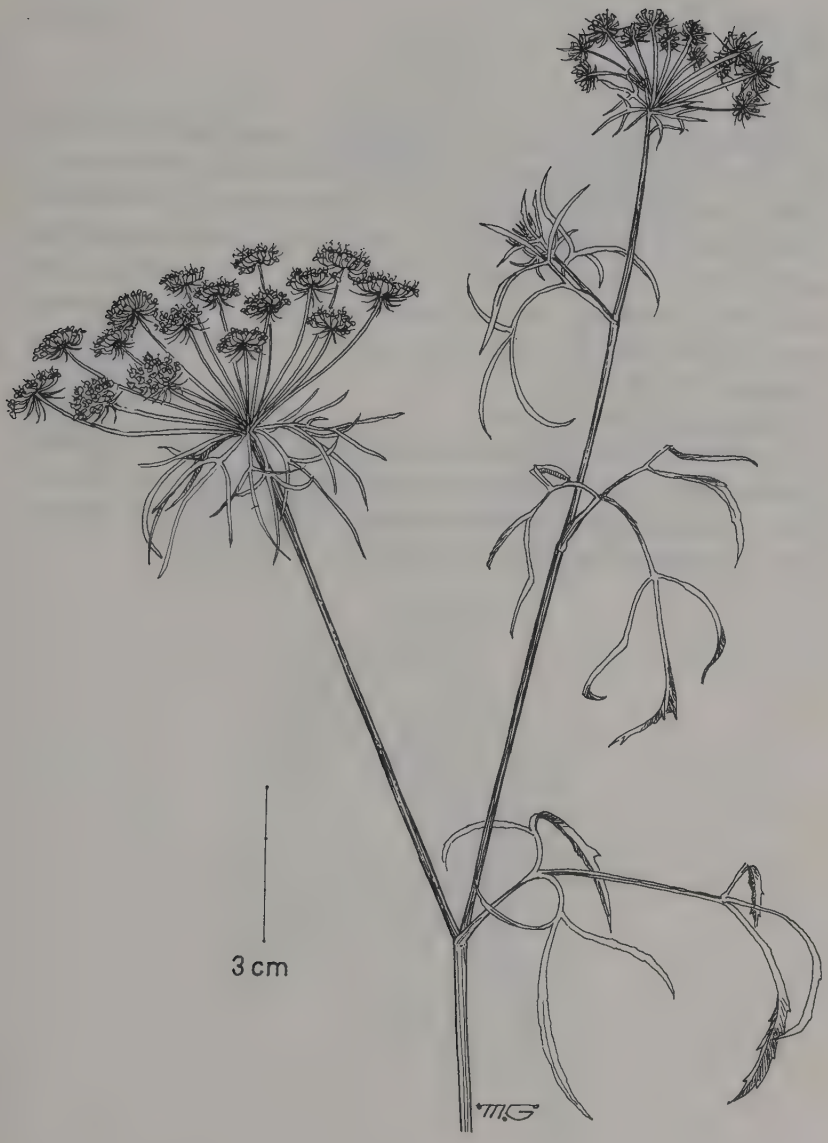
خلّة شيطاني *khilla shayṭāni* Bishop's weed

Ammi = Greek and Latin word for an umbelliferous plant; *majus* = large or big.

Annual herb, 30–80 cm, glabrous; stems erect, much branching, conspicuously furrowed; leaves 2–3-pinnate, very variable: lower leaves with broad serrate lobes; middle with lanceolate, acuminate, serrate-dentate lobes; upper leaves with linear, almost entire, to broadly serrate lobes; inflorescence with 20–50 rays, subtended by 3-fid or pinnatisect bracts; bracteoles small, linear; flowers white, pedicels slender; fruit about 2 mm, ovoid-oblong, laterally compressed, ridged, smooth.

Mediterranean, Europe, western Asia.

The seeds are diuretic, carminative, tonic, digestive, and stomachic. They are also used against asthma.


3 cm

Ammi visnaga (L.) Lam., Fl. Franç., ed.1, 3:462 (1778).
Syn. *Daucus visnaga* L., Sp. Pl., ed.1, 242 (1753).

خلّة بلدي *khilla baladi* Toothpick

Visnaga = toothpick.

Annual herb, 30–80(–120) cm; stems erect, robust, much branching, cylindrical, furrowed, densely leafy; lower leaves pinnate, with narrowly-linear lobes; middle and upper leaves 2–3-pinnate, with filiform lobes; inflorescence with numerous rays (to 120 or more), forming a dense umbel, slender in flower, thickened and stiff in fruit (hence used as toothpick); bracts pinnatisect, as long as or longer than the rays; bracteoles small; flowers white; pedicels erect, rigid in fruit; fruit about 2 mm, glabrous, with thick ribs.

Mediterranean, western Asia.

Dry mature umbel rays are used as toothpicks. The seeds are used as a diuretic, carminative, stimulant, vasodilator, and antispasmodic. They relieve congestion of the prostate gland and are also used for urinary disorders. An infusion of seeds releases renal stones with urine.

3 cm

Apium leptophyllum (Pers.) F. Muell. ex Benth., Fl. Austral. 3:372 (1866).

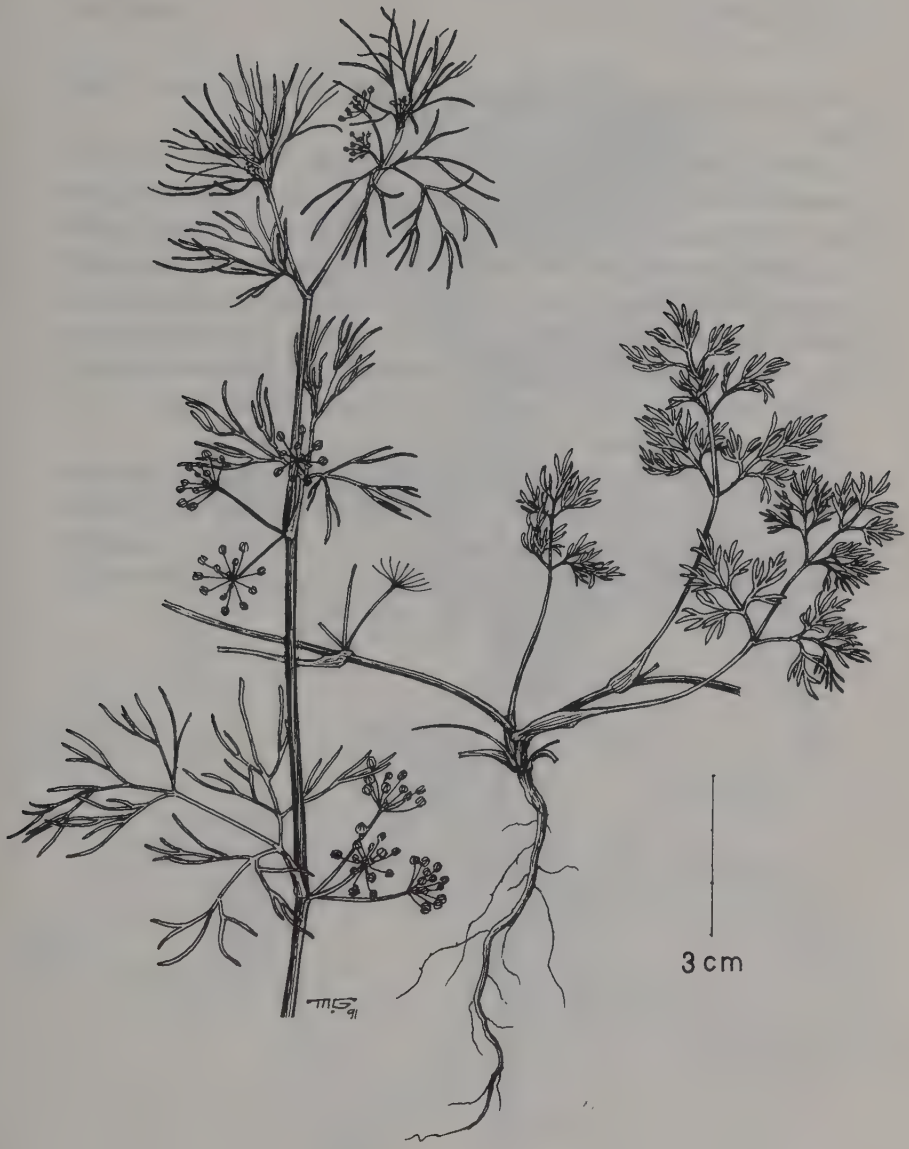
Syn. *A. tenuifolium* (Moench) Thell., in Hegi, Ill. Fl. Mittel-Eur. 5, 2:1140 (1926).

Apium possibly from *apon*, the Celtic word for water, as some species are water-loving plants, or from *apis* = bee, as the flowers are visited by bees; *leptophyllum* = having slender or thin leaves.

Annual delicate herb, 10–30 cm; stems procumbent, ascending or erect, branching; leaves 2–3-pinnate, leaf segments finely divided into narrow, almost filiform lobes; inflorescence axillary, opposite the leaves, bracts and bracteoles absent; flowers white; fruit laterally compressed.

Gardens, lawns.

Introduced from America into some warm temperate regions of the Old World.


3 cm

Urtica urens L., Sp. Pl., ed.1, 984 (1753).

حُرَيْق *ḥurēq* Small nettle

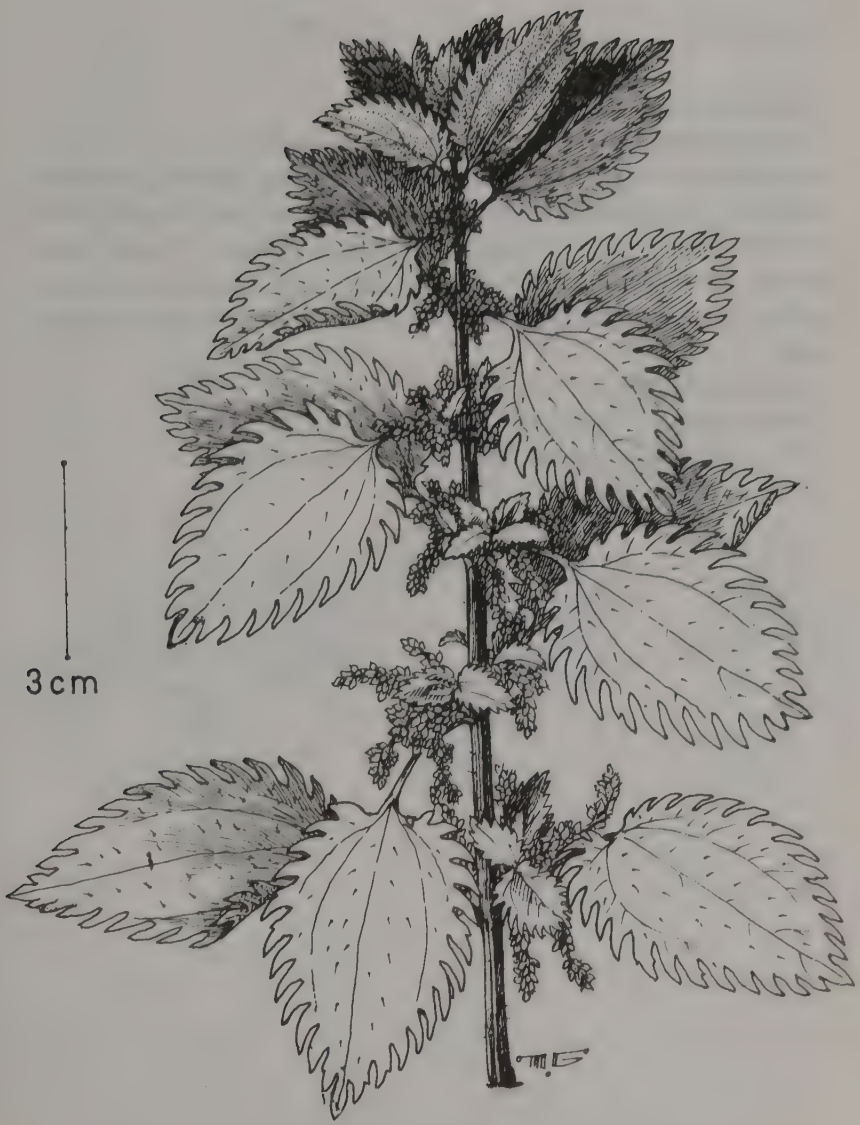
Urtica = the Latin word for this group of stinging nettles; *urens* = stinging.

Annual, monoecious herb, erect or ascending, to 60 cm high; with sparsely scattered stinging hairs; stems 4-angled, branching; leaves petiolate, with 4 small stipules at each node; leaf blade broadly-elliptic to ovate, margins deeply toothed; inflorescence axillary, usually not exceeding the petioles; flowers green, petals absent, female flowers numerous, male few, both present on the same inflorescence; fruit achene, ovate, 1.5–2 mm long, slightly compressed, enclosed in the persistent perianth.

Waste ground, roadsides, especially in Lower (northern) Egypt.

Mediterranean, Europe, Asia.

Fresh plants are used as an effective but painful rub to treat rheumatism. An infusion of the entire plant is antihemorrhagic and galactogogue. An infusion and decoction of leaves is diuretic. An extract of fresh leaves is used to stop nosebleeding and (in lotions) to promote hair growth.


3cm

Phyla nodiflora (L.) Greene, Pittonia 4:46 (1899).
Syns. *Lippia nodiflora* (L.) Mich., Fl. Bor.-Amer. 2:15 (1803).
Verbena nodiflora L., Sp. Pl., ed.1, 20 (1753).

لِبية *libya* Matgrass, Creeping vervain

Nodiflora = flowering at a node.

Perennial herb, glabrous or slightly appressed-setulose; stems procumbent, rooting at nodes, and giving rise to ascending flowering branches; leaves ovate to oblanceolate, tapering into a cuneate base, margins serrate toward the acute apex; flowers in short, dense spikes, 2–4 times longer than the leaves; calyx deeply lobed; corolla white, later becoming pale pinkish, slightly pubescent, corolla-lobes unequal; fruit ovoid smooth nutlet.

Canal banks, moist ground, lawns in gardens.

Mediterranean, western and tropical Asia.

The plant is often cultivated mixed with lawn grasses.

3 cm

Verbena officinalis L., Sp. Pl., ed.1, 20 (1753).

رِجل الحمام *rigl al-ḥamām* Vervain, Pigeon's grass, Holy herb

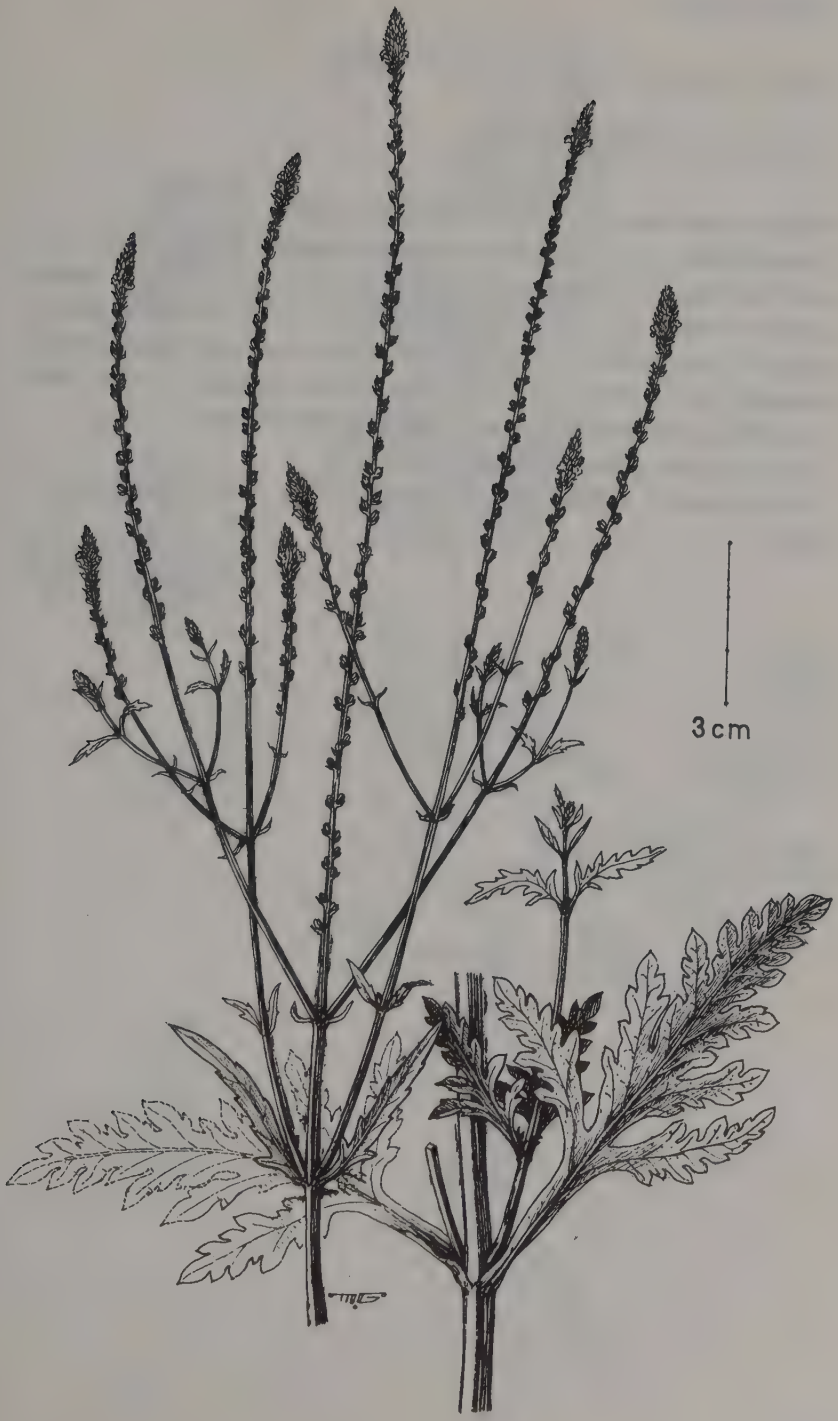
Verbena, the Latin word for leaves and shoots of laurel, myrtle, etc., used in religious ceremonies; *officinalis* = used in medicine.

Perennial herb, 30–80(–120) cm, glabrous to slightly pubescent; stems branching, erect, stiff, angular; leaves deeply incised to pinnatified, with irregular dentate lobes; flowers sessile or subsessile, in dense slender elongated spikes, becoming lax in fruit; calyx tubular, 2 mm, short-dentate; corolla 4–5 mm, lilac, tube exserted; nutlets 1.5–2 mm, reticulate above.

Moist ground, canal banks, damp roadsides, fallow fields.

Subcosmopolitan, except very cold regions.

The leaves are used as a febrifuge, diuretic, stimulant, and antidiarrheic.


3 cm

Verbena supina L., Sp. Pl., ed.1, 21 (1753).

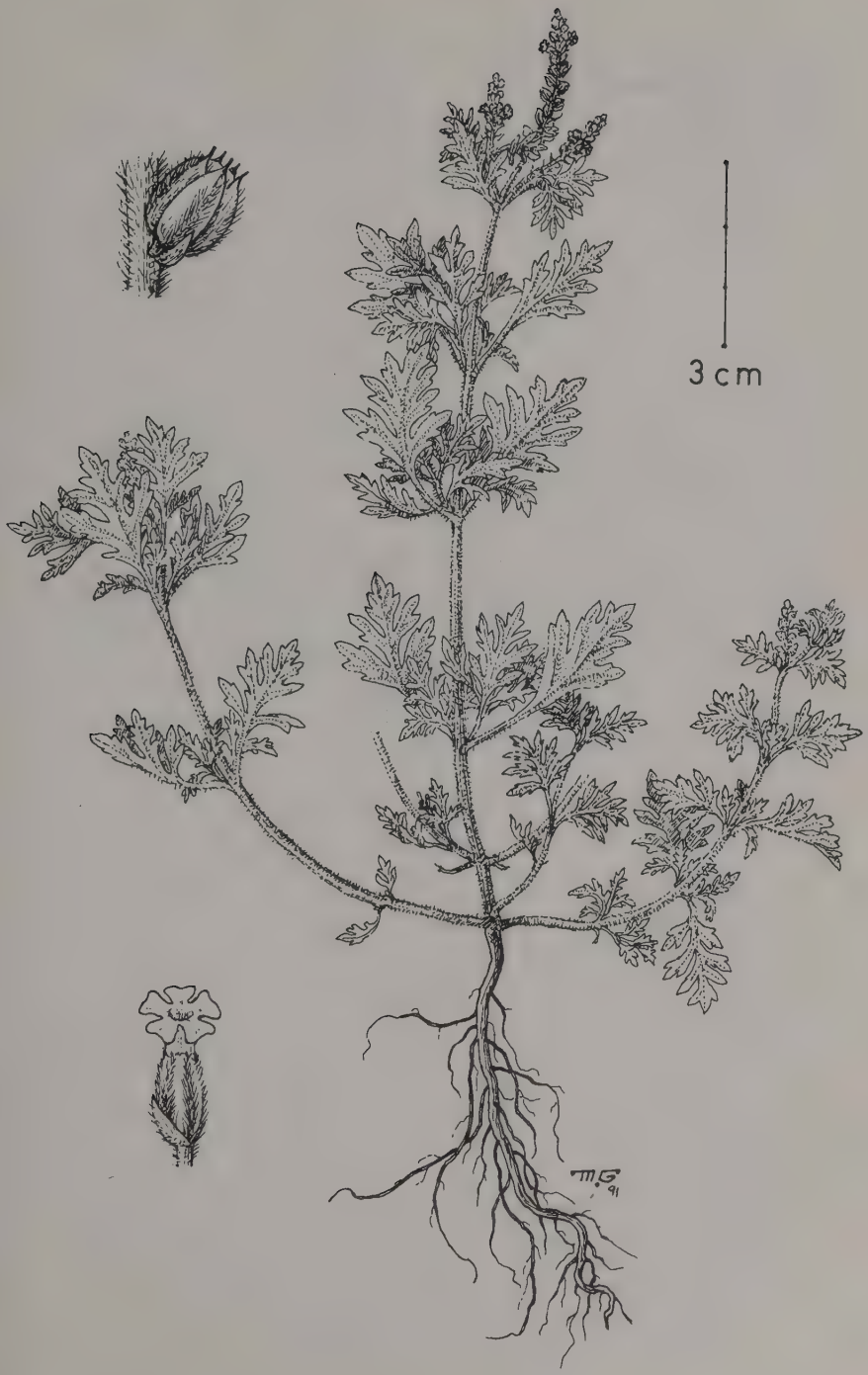
مُرَّيخ ، مُرَّيق *murrēkh, murrēq*

Supina = prostrate, allusion to the habit of the plant.

Annual herb, 20–50 cm; stems prostrate or ascending, much branching from the base, green-canescent, hispid, with white strigose hairs; leaves short-petiolate, 1–2-bipinnatisect, ending with ovate-oblong segments; spikes 2–3 cm, dense in flower, lax in fruit; bracts shorter than the calyx, lanceolate; calyx tubular, 2–3 mm, short-dentate; corolla 4–5 mm, pale blue, with a yellowish throat, corolla tube slightly exserted.

Alluvial moist ground, Nile and canal banks.

Mediterranean, central Europe, temperate Asia, northeastern tropical Africa.


3 cm
TM.G. '91

B. Monocotyledoneae
(Monocots)

Cyperus alopecuroides Rottb., Descr. Pl. Rar. Programm. 20 (1772).

Syn. *Juncellus alopecuroides* (Rottb.) C.B. Clarke in Hook. f., Fl. Brit. Ind. 6:595 (1893).

سَمَار *samār* Foxtail sedge

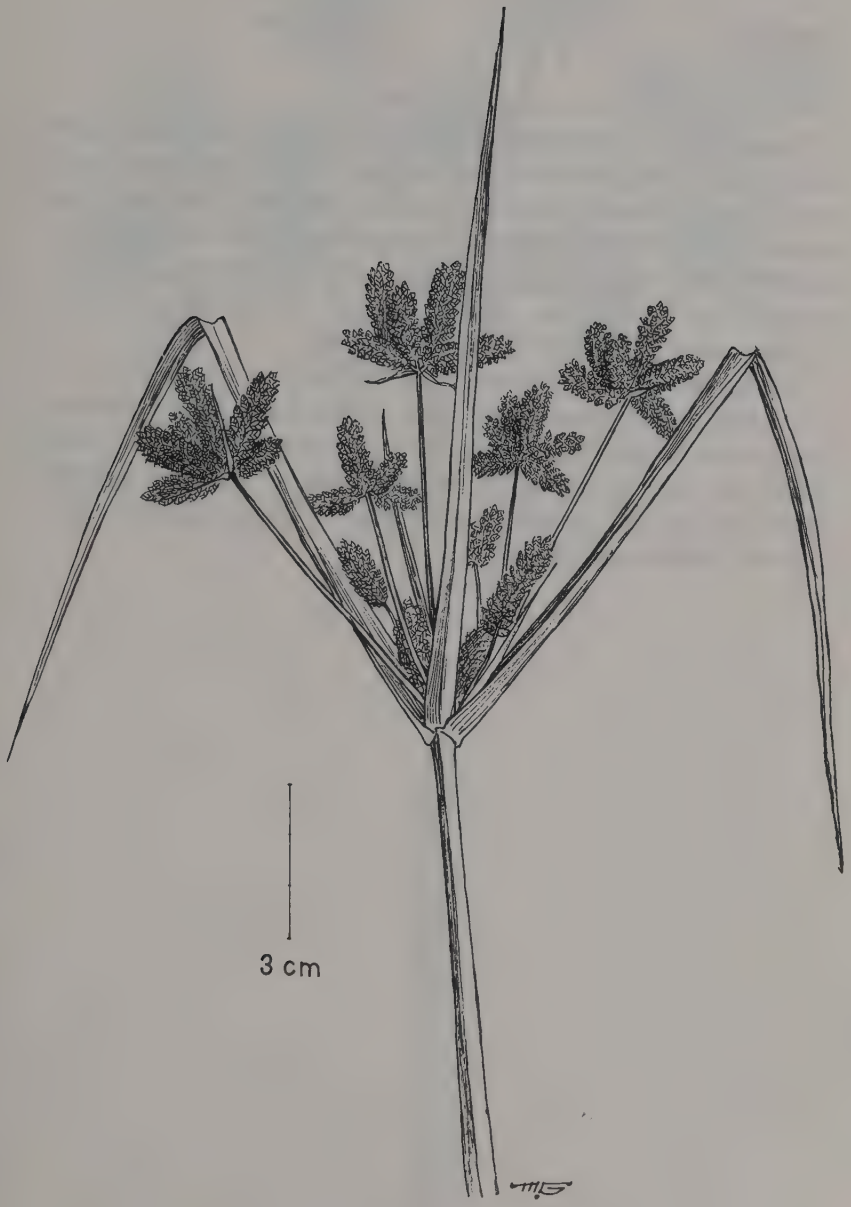
Cyperus from old Greek *kypeiros* = a sege; *alopecuroides* = resembling *Alopecurus*, a genus of grasses known as foxtail.

Perennial stout leafy herb, to 1.5 m; culms triangular; leaves broad and flat, inflorescence large, with numerous lanceolate, acute spikelets, arranged in oblong cylindric spikes; glumes rounded on the back, greenish.

Nile and canal banks, drains, swamps, ditches, rice fields, standing water reservoirs.

Tropical Africa, southeastern Asia, West Indies.

In some regions of the Nile Delta, the border between fields if unclear is often cultivated with this plant, usually along an irrigation canal. In the Fayoum it is cultivated in limited areas for making mats and chairs.


3 cm

Cyperus articulatus L., Sp. Pl., ed.1, 44 (1753).

دِيس *dīs*

Articulatus = jointed, describing the culm.

Perennial stout herb, to 1.8 m, with woody creeping rhizomes; culms cylindrical, tapering above, looks as noded, especially when dry, due to the presence of internal walls in the pith; leaves basal, with large leaf-sheaths; spikelets reddish brown, in corymbose clusters which form together a terminal umbel-like inflorescence of 4–12 rays, supported by 2–3 small bracts.

Canal banks, drains, lakes, marshes.

Tropical and subtropical Africa, Asia, North and South America.

The plant is locally used in Egypt for making mats. The rhizomes are used as incense and retain their fragrant smell for a long time. For this reason, they are used to perfume the hair ribbons of women in the countryside and are also kept in clothes boxes to impart fragrance to the clothes (Täckholm and Drar 1950).

3 cm

Cyperus difformis L., Cent. Pl. 2, 6 (1756).

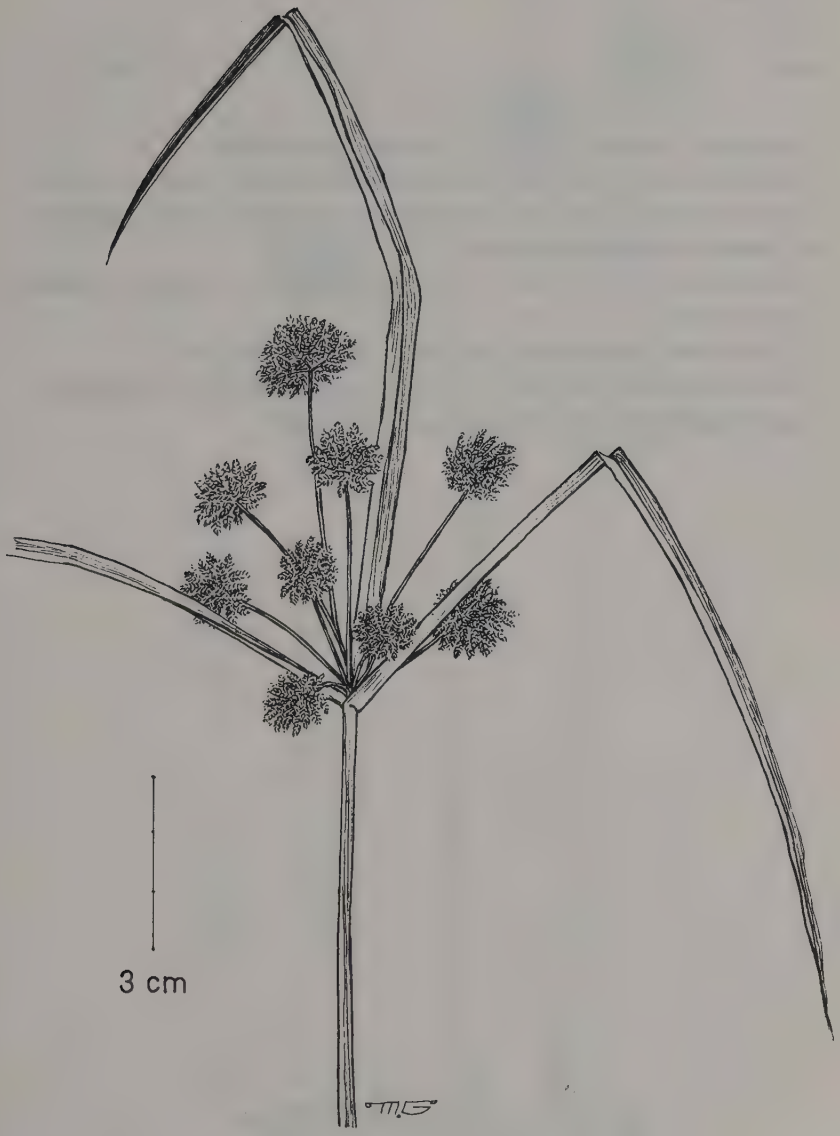
عَجيرة *ᶜagīra*

Difformis = of unusual formation.

Annual or perennial herb, 15–50 cm, culms leafy at the base; leaves few, usually withered; inflorescence supported by 2–3 long bracts, umbel-like, formed of numerous small spikelets, grouped into dense reddish green globose heads.

A characteristic weed in rice fields, also along canal banks and ditches.

Mediterranean, tropical and subtropical Africa and Asia; introduced into North America.


3 cm

Cyperus laevigatus L., Mant. Alt., 179 (1771).
Syn. *Juncellus laevigatus* (L.) C.B. Clarke in Fl. Brit. Ind. 6:596 (1893).

بُربيط *burbēṭ* Tawny sedge

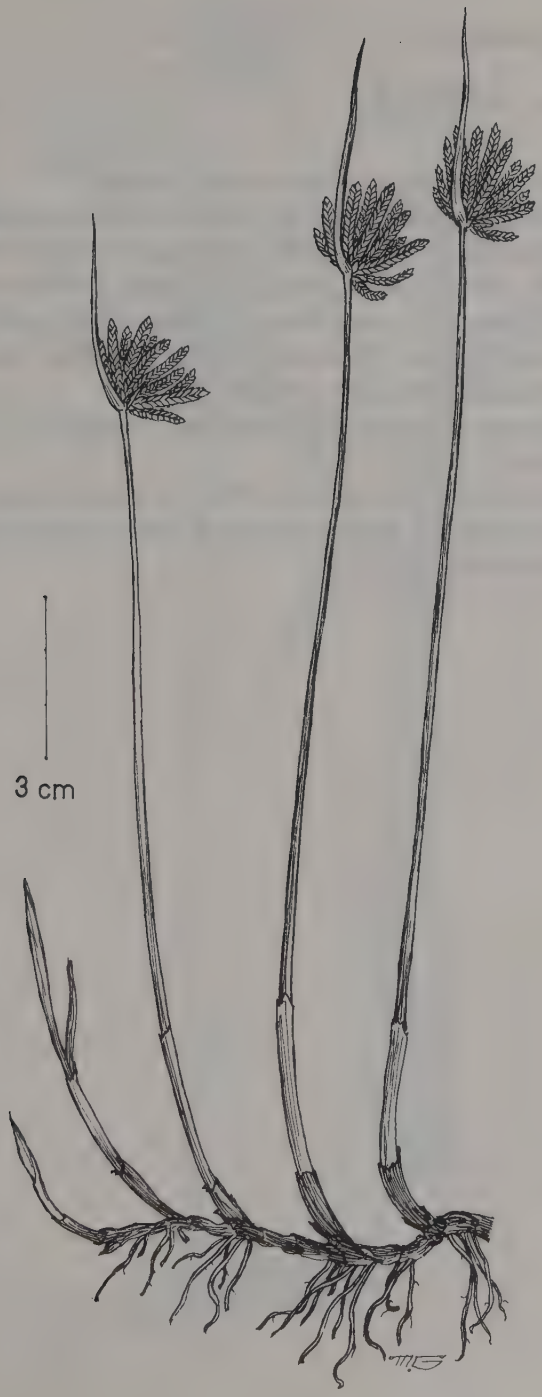
Laevigatus = smooth or slippery, allusion to the culms.

Perennial herb, 15–60 cm, with creeping rhizomes; culms stout, leafless or with short fleshy leaves; inflorescence a small sessile lateral cluster, formed of greenish spikelets.

A multiform species, known in several varieties in Egypt (Täckholm and Drar 1950).

Canal banks, around wells and springs, moist saline soils.

Africa, including the oases of the Sahara, northern Mediterranean, many tropical and subtropical regions of the world.


3 cm

Cyperus longus L., Sp. Pl., ed.1, 45 (1753).

سِعْد خشن *si^{c}d khishin* Rough cyperus

Longus = long, an allusion to the habit of the plant.

Perennial robust herb; to 1.5 m; rhizome woody, covered with broad scales, tubers absent; culms thick at the base, attenuated above; leaves not rosetted, shorter than or as long as the culm, 4–10 mm broad, margins rough; bracts 3–5, longer than the inflorescence; spikelets linear, in umbels; rays 3–8, up to 30 cm long, glumes with broad white margins.

Nile and canal banks, moist ground.

Mediterranean, western and central Europe, tropical Africa, western and central Asia.

According to Täckholm and Drar (1950), the rhizomes are aromatic and are used for scenting. Their decoction is diuretic and it is used in the treatment of rheumatism.

3 cm

Cyperus rotundus L., Sp. Pl., ed.1, 45 (1753).

سِعْد *si^{c}d* Nut-grass, Purple nutsedge

Rotund = round, probably an allusion to the tubers.

Perennial herb, close to **C. longus**, but leaves grouped at the base; rhizomes with narrow scales and small tubers; culms shorter, 15–70 cm; rays short, up to 10 cm.

Fields, gardens, lawns, moist ground.

Mediterranean, western and central Europe, tropical Africa, widespread in many tropical and subtropical regions of the world.

Tubers are used in folk medicine as a sedative, diuretic, carminative, stimulant, tonic, aphrodisiac, and stomachic, and for other purposes (cf. Täckholm and Drar 1950; Boulos 1983).

3 cm

Fimbristylis bisumbellata (Forsskål) Bubani, Dodecanthea, 30 (1850).

Syn. *Scirpus bisumbellatus* Forsskål, Fl. Aegypt.–Arab. 15 (1775).

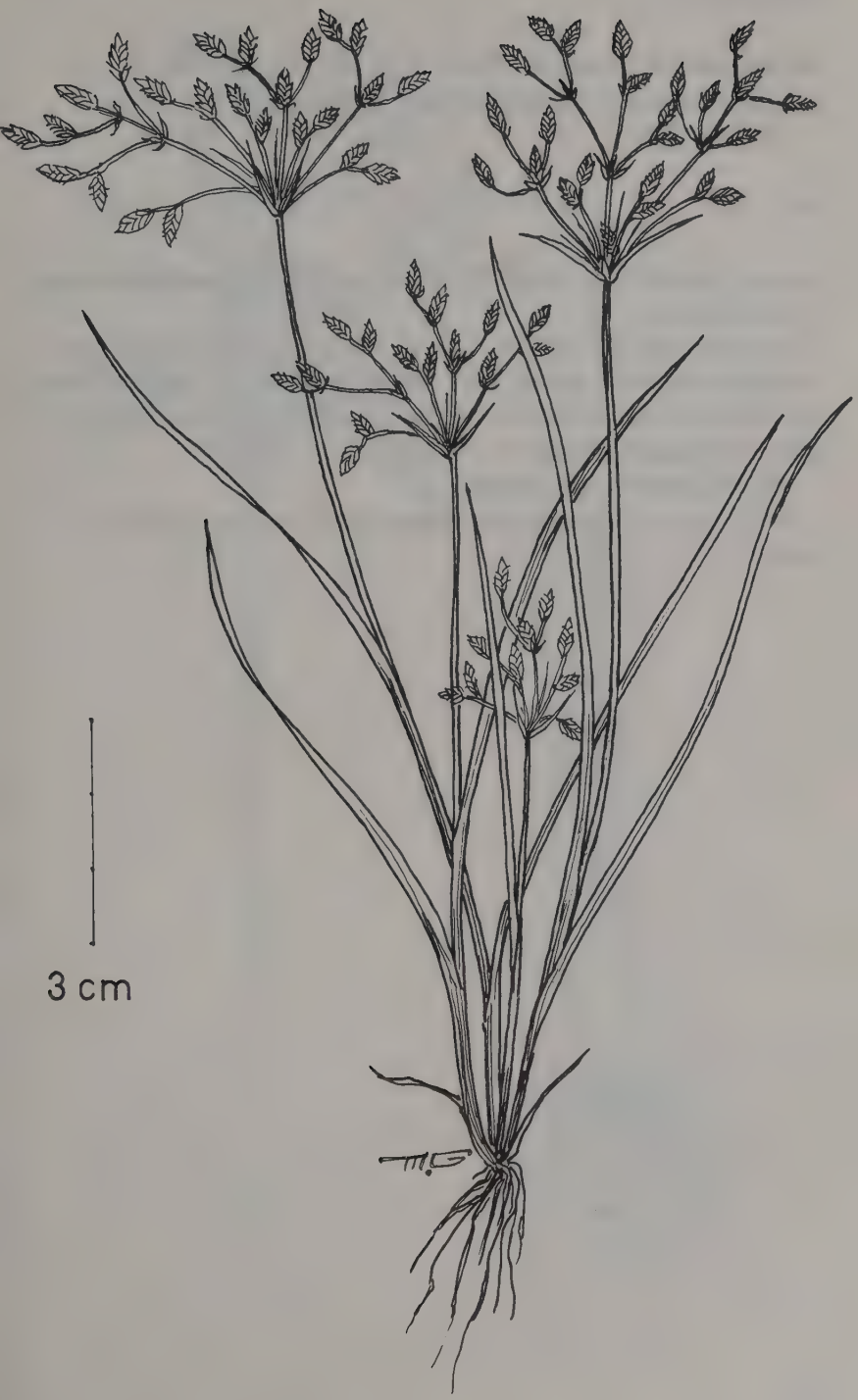
شَعْرة *shaʿra*

Bisumbellata = double umbellate, or with a compound umbel.

Annual herb, 15–25 cm, pubescent; culms in dense tufts, trigonous, leafy at the base; spikelets pedicelled, in terminal compound umbels; glumes pale reddish brown.

Nile and canal banks, rice fields.

Widespread in subtropical and warm temperate regions of the world.


3 cm

Scirpus litoralis Schrader, Fl. Germ. 1:142, t.5., f.7 (1806).
Syn. *Schoenoplectus litoralis* (Schrader) Palla in Engl., Bot. Jahrb. 10:299 (1888).

خَبّ *khabb*

Scirpus = an old Latin name for a rush, bog plants; *litoralis* = growing on the seashore.

Perennial herb, 40–150 cm, with slender rhizomes; culms solitary, trigonous, with basal sheaths, thick below, attenuated and striped above; inflorescence with compound umbels, rays unequal; glumes glabrous, brown, with scarious margins.

Marshes, ditches, moist ground.

Mediterranean, central Europe, western and central Asia, northern Australia.

3 cm
MG

Scirpus tuberosus Desf., Fl. Atl. 1:50 (1798).

هِيش *hēsh* Sea club-rush

Tuberosus = producing or resembling tubers, describing the rhizomes.

Perennial herb, 25–60 cm, rhizome black, with swollen nodes and spongy roots; culms erect, sharply trigonous; leaves flat, keeled, mainly basal, overtopping the inflorescence; inflorescence a compound umbel; bracts leafy, longer than the rays.

Canals, rice fields, marshes, drains, moist ground.

Mediterranean, western and central Asia; introduced into North America.

3 cm

Avena fatua L., Sp. Pl., ed.1, 80 (1753).

زُمَّير *zummayr* Wild oat

Avena from Latin *avena*, a classic name for oat; *fatua* = empty, probably an allusion to the hollow culm.

Annual grass, 20–60(–80) cm; culms erect, glabrous; leaves broad, panicle branching in all directions, spikelets 2–3-flowered, glumes subequal; all flowers awned, falling one by one at maturity; lower part of lemmas with long stiff brownish or white hairs.

Fields, gardens, orchards.

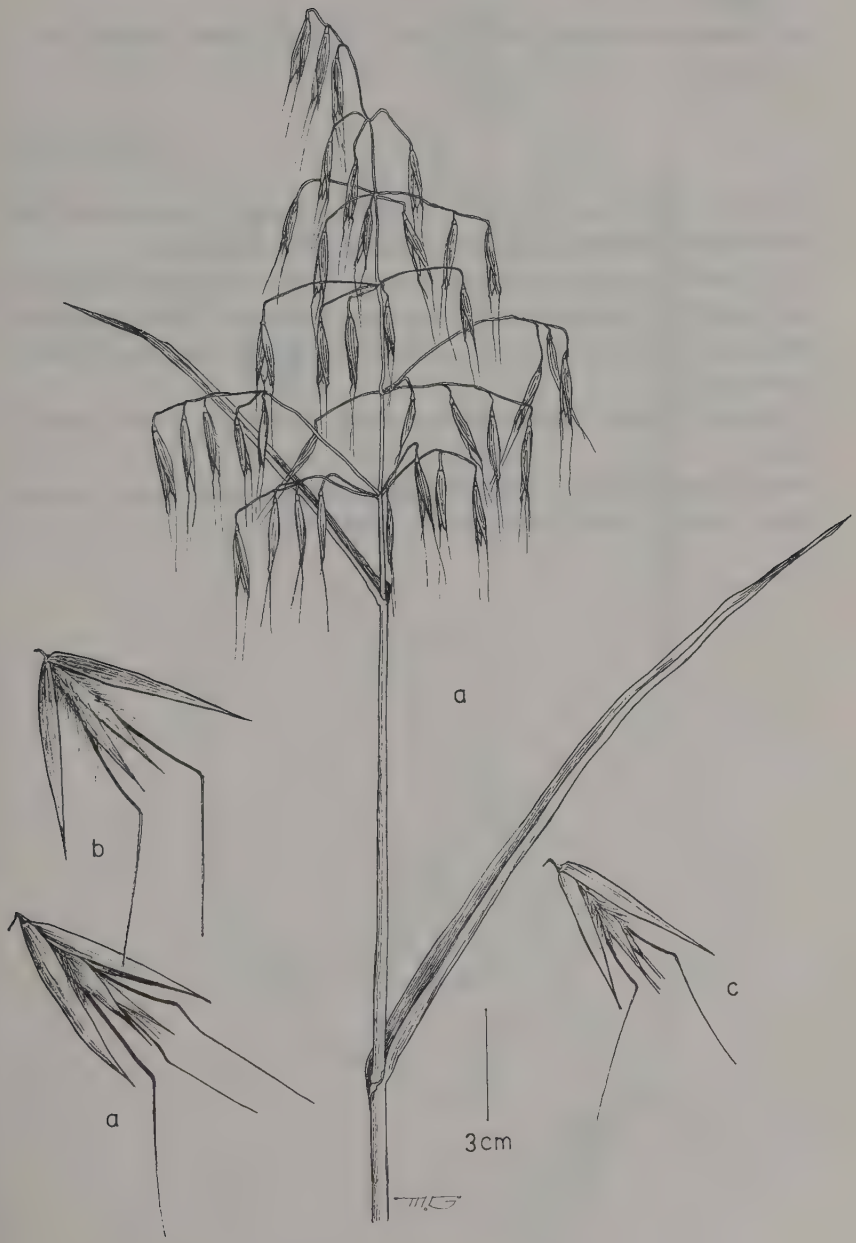
Mediterranean, Africa, Europe, Asia; introduced into North and South America.

Two other closely related weedy species are:

Avena sterilis L., Sp. Pl., ed.2, 118 (1763).
Spikelets larger, flowers connate and falling as one unit at maturity.

Avena barbata Pott ex Link, Schrad., J. Bot., 2:315 (1799) subsp. **wiestii** (Steudel) Mansf., Kulturpfl. Beih. 2:479 (1959).
Spikelets 2-flowered, 2-awned, smaller than in the above two species.

a. **Avena fatua**
b. **Avena sterilis**
c. **Avena barbata** subsp. **wiestii**


a
b
a
c
3cm

Brachiaria eruciformis (Sm.) Griseb. in Ledeb., Fl. Ross., 4:469 (1853).

Syn. *Panicum eruciforme* Sm. in Sibth. & Sm., Fl. Graec. Prodr. 1:46 (1806).

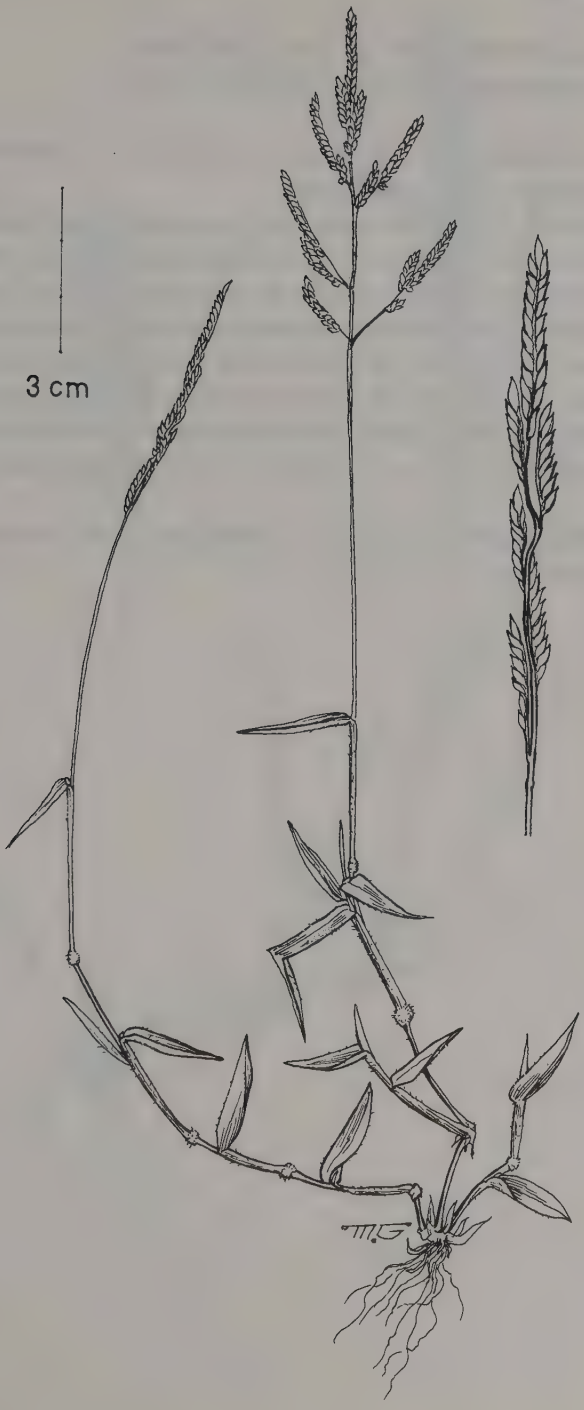
Signal grass

Brachiaria from Latin *brachium* = an arm, allusion to the mode of attachment of the racemes to the axis; *eruciformis* = tendril-like.

Laxly tufted annual herb; culms creeping, rooting at nodes; leaf sheaths and blades finely pubescent; inflorescence formed of spaced racemes; spikelets 2–2.5 mm, narrowly ovate, upper glume and lower lemma pubescent.

Gardens, orchards; summer weed in fields of cotton and other summer crops.

Eastern Mediterranean, southern Europe, western Asia, tropical eastern Africa, southern Africa; introduced into North America.


3 cm

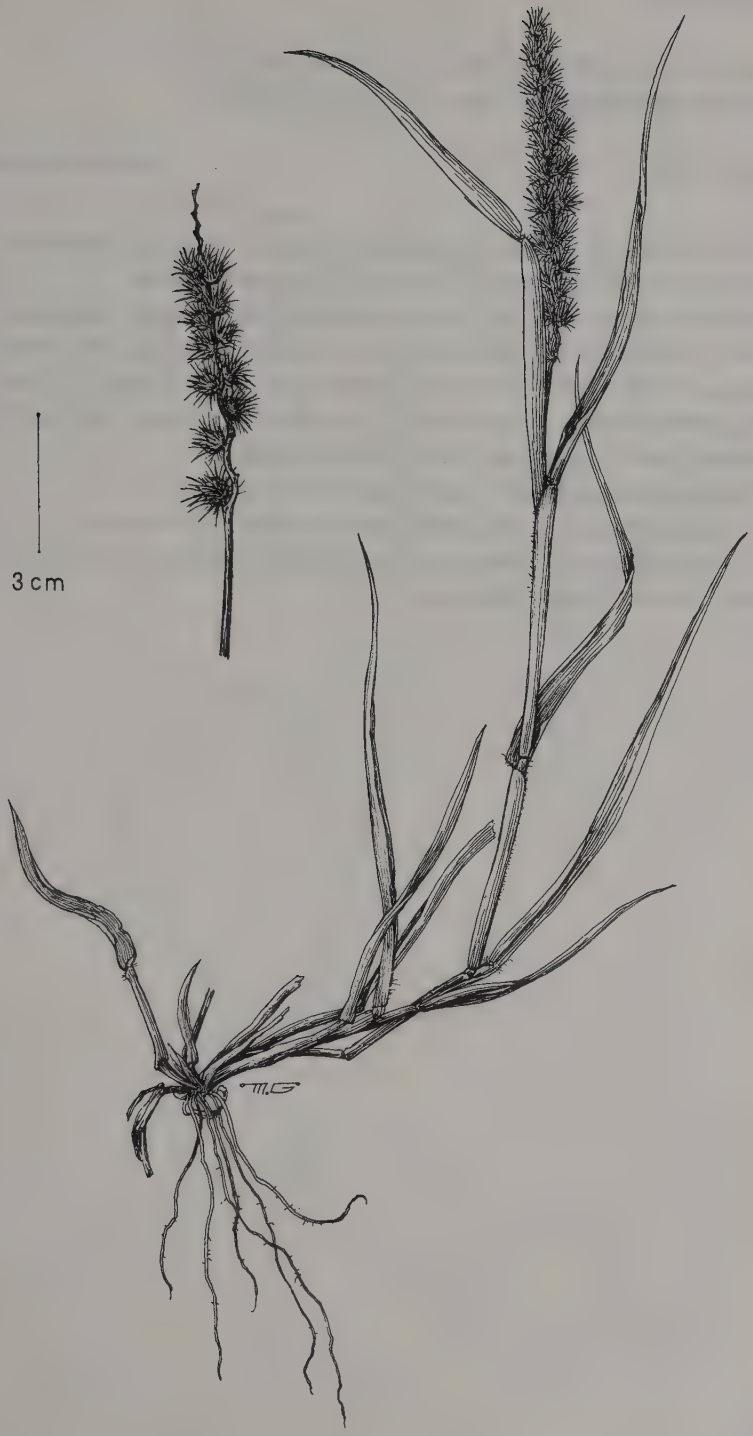
Cenchrus biflorus Roxb., Fl. Ind., 1:238 (1820).
Syn. *C. barbatus* Schum., Beskr. Guin. Pl., 43 (1827).

Cenchrus derived from a classical Greek name for a group of fodder grasses; *biflorus* = blooming in pairs.

Annual herb, 15–30 cm; culms erect or ascending; leaf-sheaths compressed, glabrous, scabrous above; ligule a densely ciliate rim, lamina linear-lanceolate, tapering toward the apex; inflorescence spike-like, formed of clusters of spikelets, enclosed by a subsessile involucre of flattened bristles, connate at the base to form a disc, which falls with the spikelets at maturity in the form of rigid prickly subglobular parts.

Recently introduced; rapidly invading newly reclaimed sandy soils adjacent to the desert, east of the Nile Delta and in some parts of Upper Egypt.

Tropical and subtropical Africa; introduced into some warm regions of Asia and America.


3 cm

Cynodon dactylon (L.) Pers., Syn. Plant. 1:85 (1805).
Syn. *Panicum dactylon* L., Sp. Pl., ed.1, 58 (1753).

نِجيل *nigīl* Bermuda grass

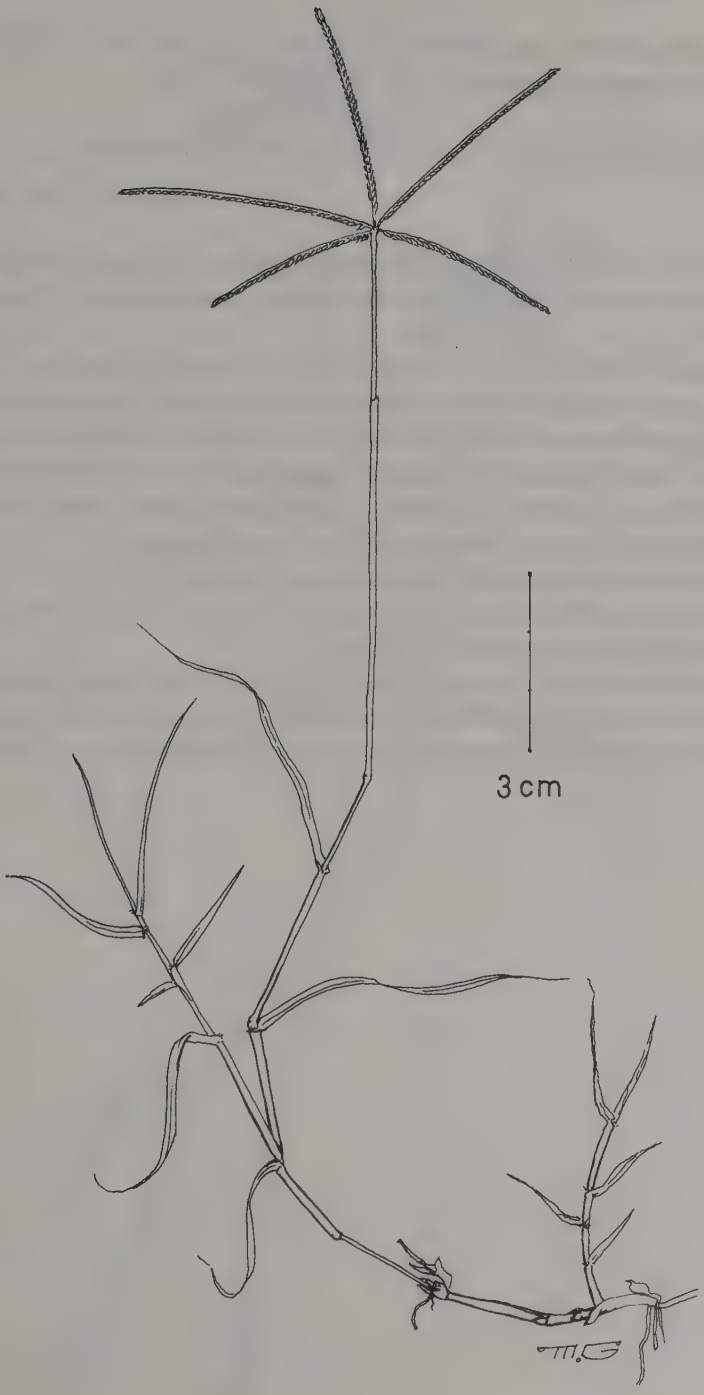
Cynodon from Greek *kyon* = dog, and *odons* = tooth, or resembling dogtooth; *dactylon* = fingerlike, describing the inflorescence.

Perennial grass, creeping by scaly rhizomes; leaves linear-lanceolate, ligule a ring of hairs; culms ending in a cluster of spikes, 4–5, rarely more; spikelets sessile, in 2 rows, compressed, about 2.5 mm, 1-flowered, glumes almost of equal length, uni-nerved; lemma as long as the spikelet, 3-nerved; palea as long as lemma, 2-keeled.

Fields, gardens, orchards, canal banks, lawns, etc.

Tropical, subtropical, and warm temperate regions of the world.

In folk medicine it is used as a diuretic and emollient as well as for cough, renal, and urinary troubles.


3 cm

Dactyloctenium aegyptium (L.) Willd., Enum. Pl., 1029 (1809). Syn. *Cynosurus aegyptius* L., Sp. Pl., ed.1, 72 (1753).

نَعيم الصُّليب ، رِجل الحربايَة *naʿīm al-ṣalīb, rigl al-ḥarbāya*

Egyptian finger grass

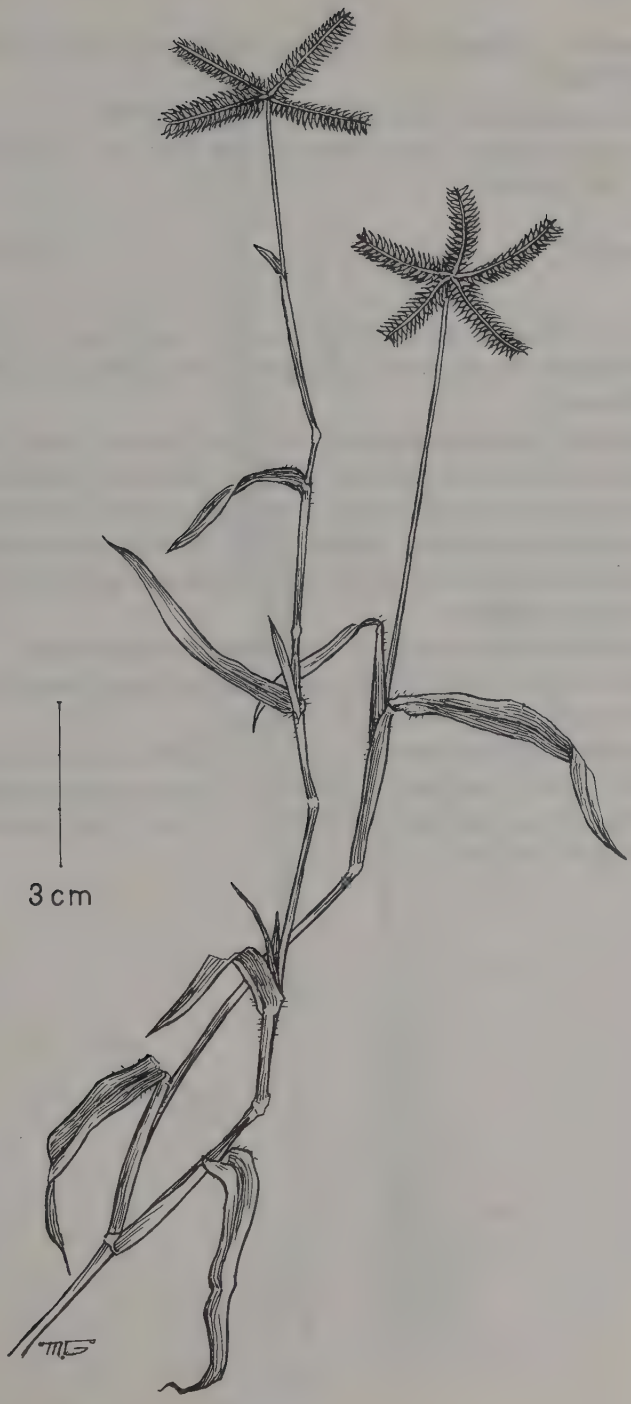
Dactyloctenium from Greek *dactylos* = finger, and *ktenion* = little comb, an allusion to the shape of the inflorescence; *aegyptium* = of Egyptian origin.

Annual herb, 10–30 cm; culms erect or ascending, glabrous, richly branched, rooting at the nodes; leaves linear-acuminate, ciliate, with bulbous-based hairs on the margins; leaf sheaths striate, keeled above; ligule short, ciliate; spikes 4–5, flattened, distal part often without spikelets; spikelets 3–5 flowered, spreading at right angles; upper glume strongly keeled, awned, lemma 3-veined; grain transversely rugose.

Fields, gardens, orchards, waste and moist ground.

Widely distributed in tropical and subtropical regions of the Old World; introduced into the New World.

In folk medicine, a decoction from seeds is used for kidney inflammations (Guest in Bor and Guest 1968). The seeds are also used for nervous diseases. The roots are used for amenorrhea (Täckholm and Drar 1941).


3 cm

Desmostachya bipinnata (L.) Stapf in Thistleton-Dyer, Fl. Cap. 7:632 (1900).

Syns. *Briza bipinnata* L., Syst. Nat., ed.10, 2:875 (1759).
Eragrostis bipinnata (L.) Muschler, Verhandl. Bot. Ver. Prov. Brandenb. 49:74 (1907).

حلفا *ḥalfa* Halfa grass

Desmostachya from Greek *desmos* = binding material, and *stachys* = a plant with narrow inflorescence; *bipinnata* = double-feathered, referring to the inflorescence.

Coarse robust tufted perennial herb, to 1.2 m, rhizomes widely spreading, thick, scaly; culms glabrous, smooth, leaves in compact basal rosette; empty basal sheaths yellow, glossy; leaf blades linear; inflorescence a long erect spike-like panicle, 30–50 cm long; spikelets many-flowered, sessile or subsessile, strongly compressed, alternate, closely packed on short branches.

Nile and canal banks, drains, ditches, roadsides, waste ground.

Northern Africa, Sahara, eastern Africa, southeastern Mediterranean, Arabia, Iraq to India and China.

Since early pharaonic times, the plant has largely been used in rural Egypt for making ropes, baskets, and mats. It may be used as fodder in the absence of other more palatable plants. It is also a good sand binder (Täckholm and Drar 1941).

3cm

Dichanthium annulatum (Forsskål) Stapf in Prain, Fl. Trop. Afr. 9:178 (1917).

Syn. *Andropogon annulatus* Forsskål, Fl. Aegypt.–Arab. 173 (1775).

حِميرة ، أبو قَصَبة *ḥimēra, abu qasaba*

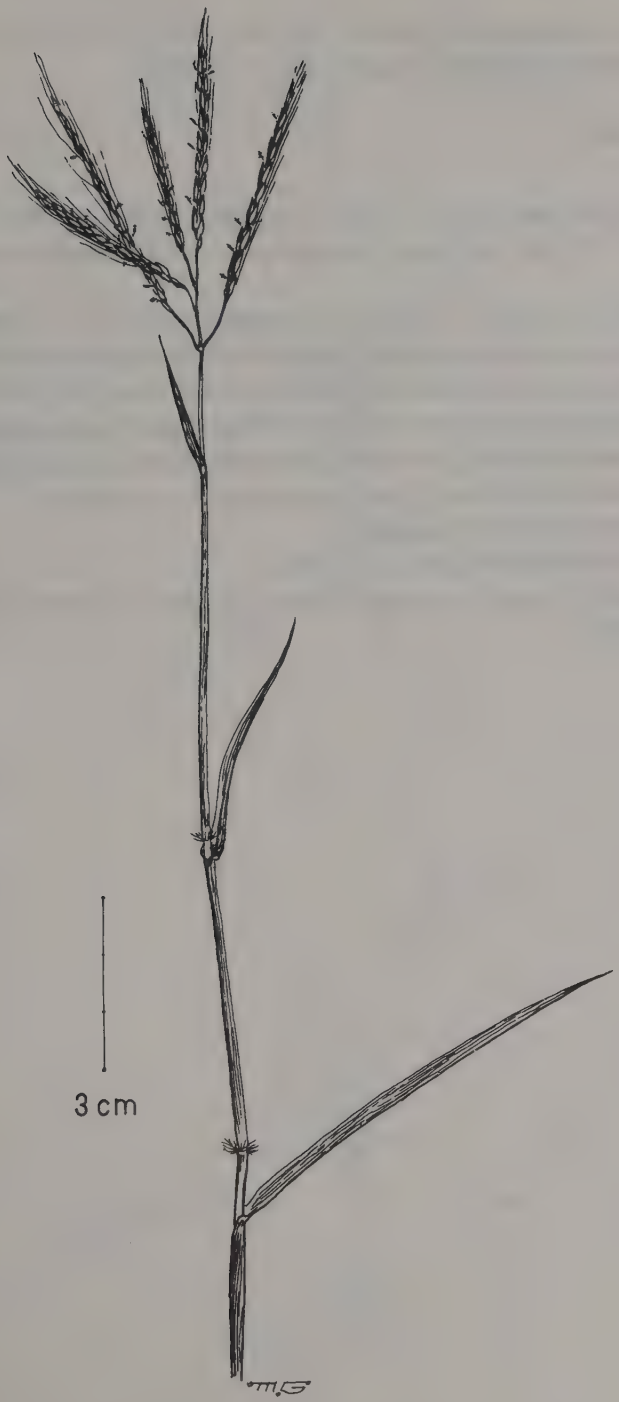
Dichanthium from Greek *dicha* = in two, and *anthos* = flower, an allusion to the two kinds of spikelets within the inflorescence; *annulatum* = ringlike or ringed, probably describing the barbed nodes of the culm.

Perennial herb, to 1 m; rhizome woody, thick; culms densely tufted, erect or ascending, simple or branched, barbed at the nodes; leaf sheaths tight, glabrous; ligule scarious; lamina linear, tapering toward the apex; infloresence of several spike-like racemes; usually purplish, formed of numerous overlapping sessil and pedicelled spikelets, sessile spikelets awned, spikelets with either male or bisexual flowers, glumes of equal length; lower lemma much shorter than the glumes.

Waste ground, roadsides, canal banks.

Northern Africa, Sahara, eastern Mediterranean, Arabia, Iraq to northern India.

This is a good fodder plant.


3 cm

Digitaria sanguinalis (L.) Scop., Fl. Carn., ed.2, 1:52 (1772).
Syn. *Panicum sanguinale* L., Sp. Pl., ed.1, 57 (1753).

دَفيرة *dafira* Crab grass

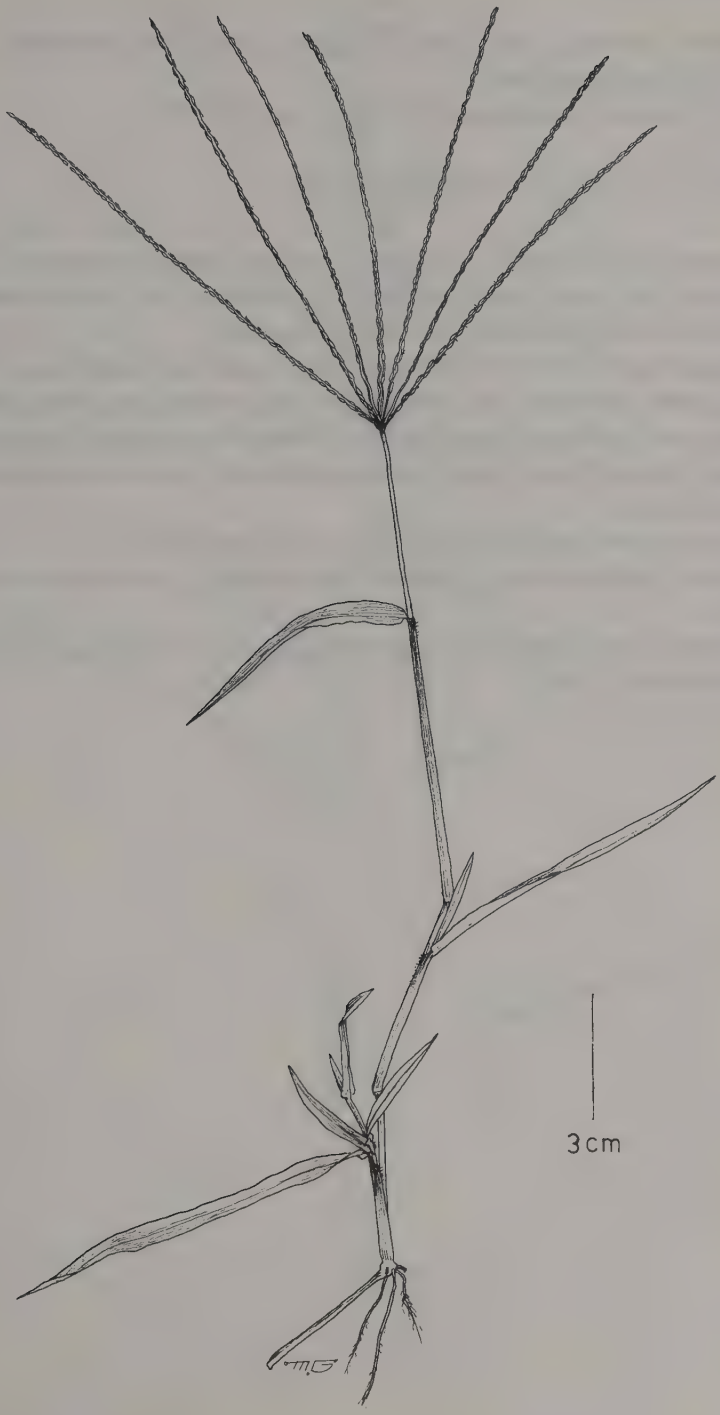
Digitaria from Latin *digitus* = finger, describing the inflorescence; *sanguinalis* = of blood red color, an allusion to the reddish color of the plant.

Annual herb, 30–80 cm, culms often reddish purple, erect or decumbent, branched at the base, rooting at the lower nodes; leaf blades linear-acuminate, lower parts of leaf sheaths covered with dense tubercle-based hairs; spikelets purplish, ovate-elliptic, awnless; upper glume and lemma glabrous, but spiny along the nerves; lower lemma with 5–7 scaberulous nerves; palea a hyaline scale; upper lemma ovate-acute, smooth.

Fields, gardens, lawns, roadsides.

Warm and temperate regions of the world.

This species is grazed by horses, cattle, and sheep (Guest in Bor and Guest 1968).


3 cm

Dinebra retroflexa (Vahl) Panz., Dankschr. Acad. Wiss. München 1813:270, t.12 (1814).

Syn. *Cynosurus retroflexus* Vahl, Symb. Bot. 2:20 (1791).

نِجيل النمر ، ضِناب *nigīl al-nimr, ḍināb*

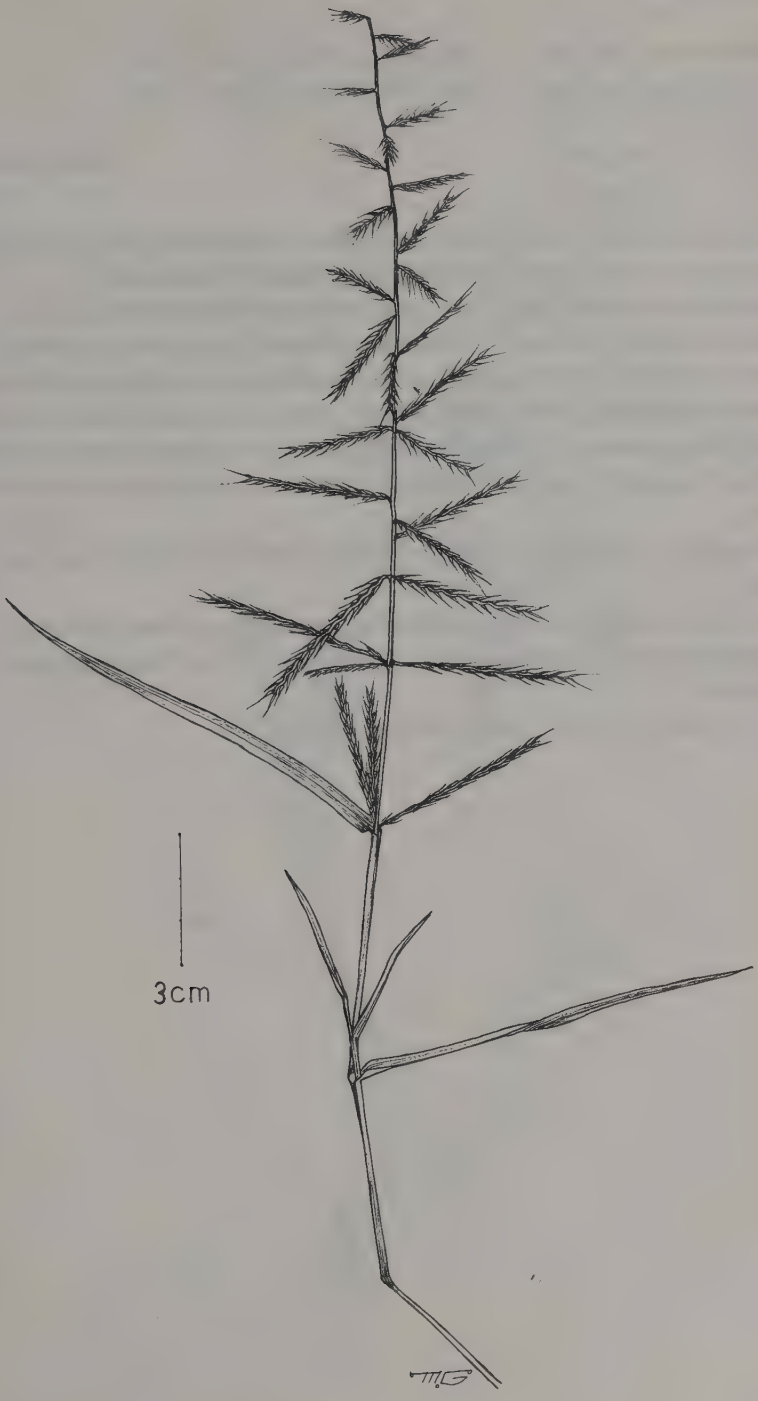
Dinebra is most probably derived from Arabic *dhinēba*, diminutive of *dhanab*, 'tail', thus meaning little tail, allusion to the inflorescence; *retroflexa* = bent backwards, describing the spikes.

Annual herb, 20–80 cm; culms erect or ascending, branching at the base, leafy; leaf blades flat, flaccid, glaucous or dark green, often with sparse white hairs on the upper surface; inflorescence of sessile alternate spikes, some deflexed; spikelets loosely imbricate; glumes with a terminal rigid awn.

Summer weed, especially in sugarcane and cotton fields.

Eastern Mediterranean, tropical and southern Africa, Arabia to western India.

When soft and flowering, this species is grazed by buffaloes (Guest in Bor and Guest 1968).


3cm

Echinochloa colona (L.) Link, Hort. Berol., 2:209 (1833).
Syn. *Panicum colonum* L., Syst. Nat., ed.10, 2:870 (1759).

أبو ركبة *abu rukba* Deccan grass

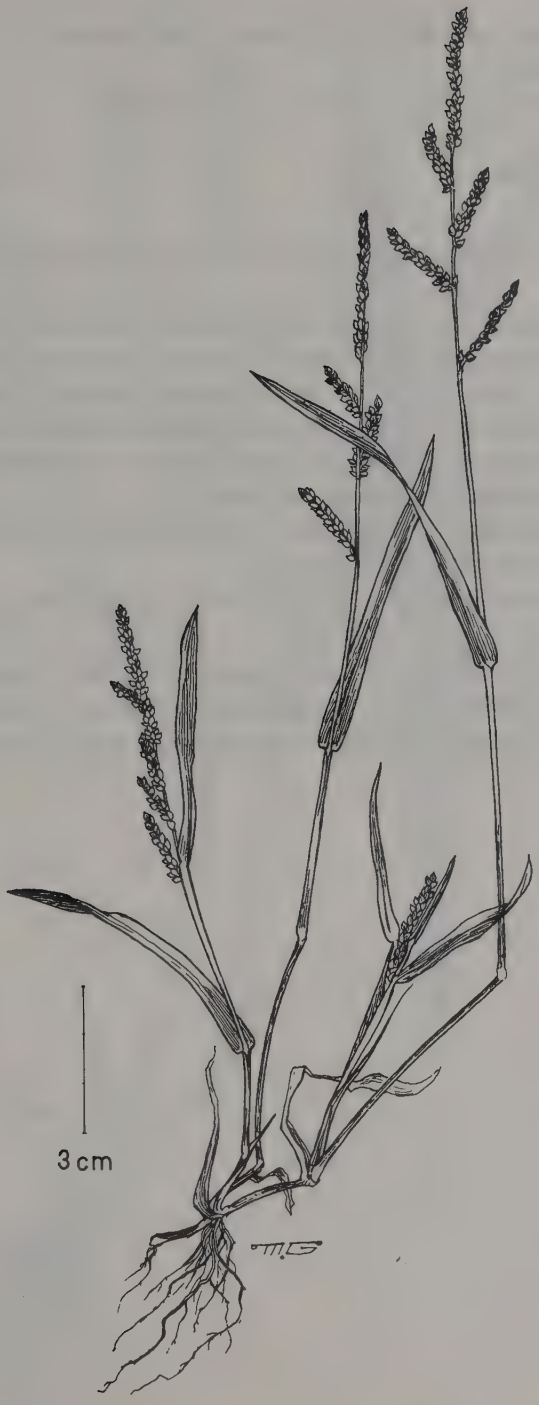
Echinochloa from Greek *echinos* = hedgehog, and *chloe* = grass, referring to the spiny inflorescence of some species related to this genus.

Annual herb, 20–60 cm; culms often forming tufts, branching, decumbent, rooting at the base; leaf blades glabrous, ligule absent; panicle erect, of spaced narrow racemes, erect or appressed to the axis; spikelets green or purplish, almost sessile, usually 4-ranked, ovate-elliptic, awnless; glumes unequal; the lower about 1 mm, 3-nerved, hispid on the nerves; the upper 2 mm, 5–7-nerved, scabrid on the nerves; lower floret male.

Irrigation canals, moist ground, gardens, orchards; mainly a summer weed.

Tropical, subtropical, and warm temperate regions of the world; most probably native of tropical Africa and Asia and later introduced into America.

This grass is used as summer fodder in Egypt.


3 cm

Echinochloa crusgalli (L.) P. Beauv., Essai Agrost. 53, 161, t.11, f.2 (1812).

Syn. *Panicum crusgalli* L., Sp. Pl., ed.1, 56 (1753).

دِنيبة *dinēba* Cockspur grass

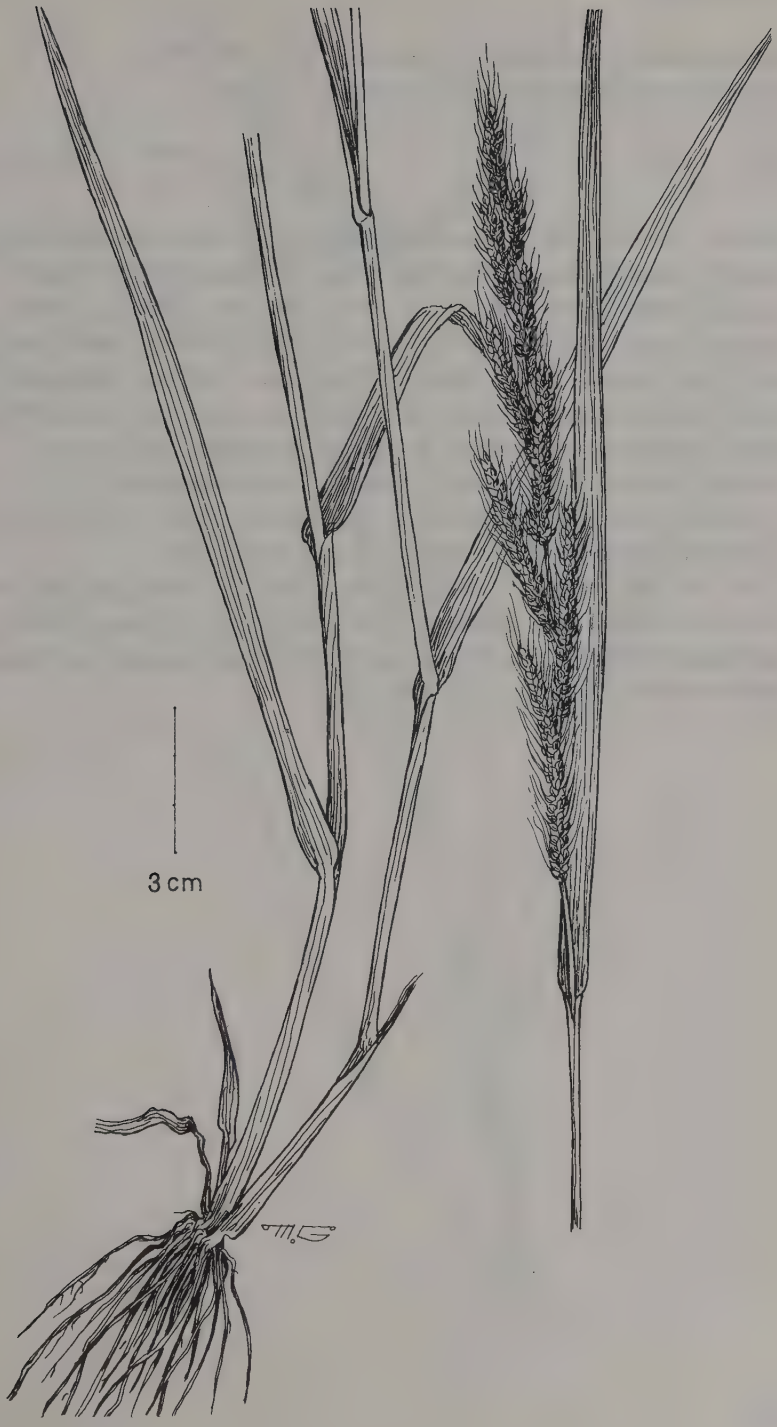
Crusgalli = cock's spur, probably an allusion to the shape of the inflorescence.

Annual grass, to 1.5 m in moist habitats, e.g. in rice fields; much shorter, spreading and tufted in dry habitats (usually moist in the beginning of the plant growth and later subjected to drought); culms stout, swollen and glabrous at the nodes; leaf blades flat, glabrous; leaf sheaths hispid, ligules absent; panicle of spaced spike-like racemes; spikelets hispid, ovate-elliptic, acuminate or awned.

A characteristic summer weed of rice fields, also along irrigation canals, ditches, and in moist ground.

Warm and temperate regions of the Northern Hemisphere, less frequent in the tropics.

The plant is cultivated in some regions of the Nile Delta as summer fodder grass (Mohammed el-Gibali, personal communication); it was introduced into many countries as valuable fodder grass (Guest in Bor and Guest 1968).


3 cm

Eleusine indica (L.) Gaertn., Fruct. Sem. Pl. 1:8 (1788).
Syn. *Cynosurus indicus* L., Sp. Pl., ed.1, 72 (1753).

نِجيل *nigīl* Wire grass

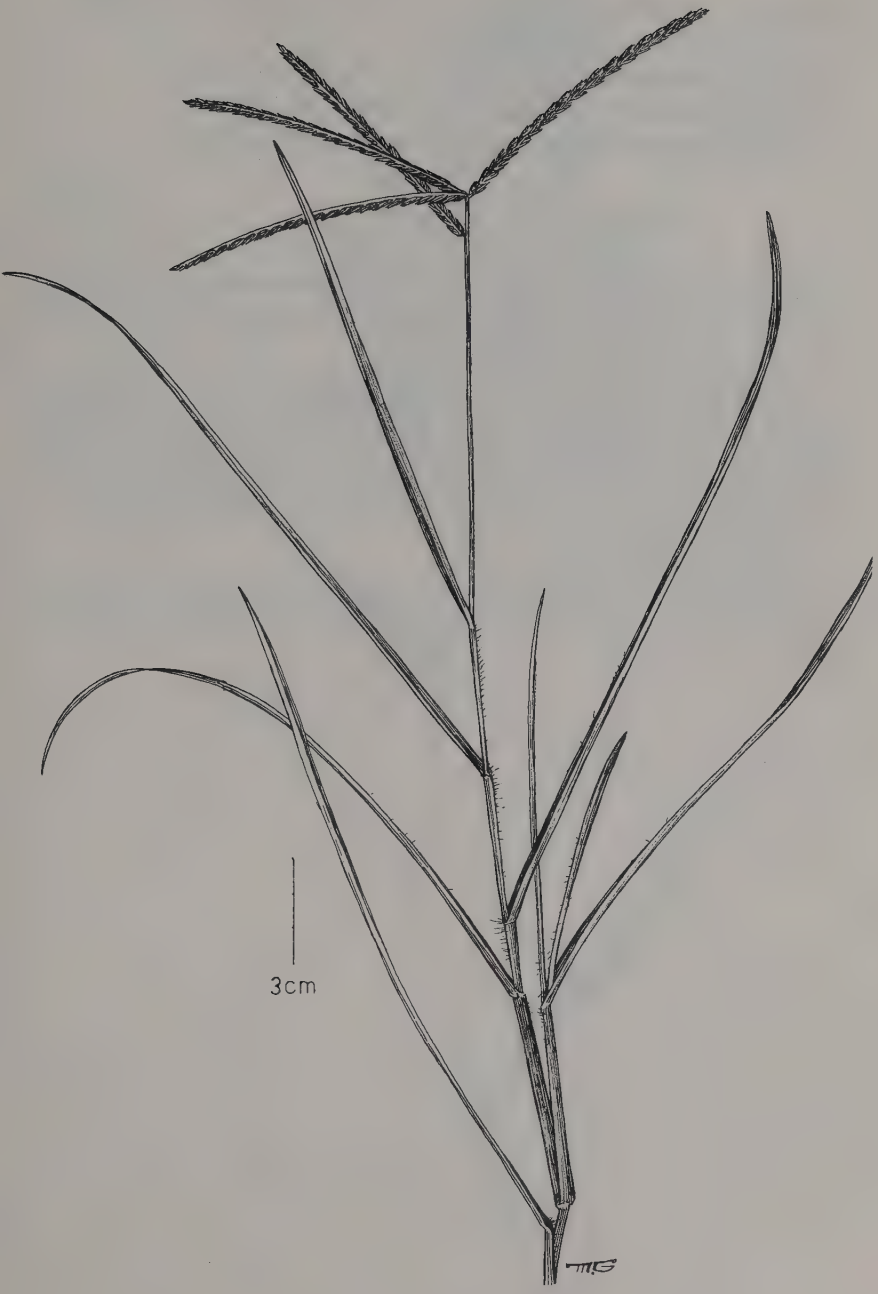
Eleusine from the city of Eleusis in Greece where the temple of Ceres was established, allusion to the plant unclear; *indica* = of Indian origin.

Annual tufted grass, 30–80 cm; culms erect or ascending, usually branching at the lower nodes; leaf blades folded; leaf sheaths compressed, with ciliate margins; ligule fringed; inflorescence digitate, compressed; spikes clustered at the top of the culm, with the exception of one or few below the apical group; spikelets 3–8-flowered, elliptic; glumes acute.

Summer weed in fields, gardens, orchards, lawns; naturalized.

Tropics and subtropics, especially frequent in tropical Africa; introduced into many warm and temperate regions of the world.

This is a very nutritious grass which is good for grazing and hay as well as for binding river banks, dams, and loose earth. Its tough fibrous roots penetrate deeply into the soil and form in time a perfect mat, thus suitable for lawns (Täckholm and Drar 1941).


3cm

Eragrostis cilianensis (All.) Vign.-Lut. ex Janchen, Mitt. Naturn. Ver. Univ. Wien, 5(9):110 (1907).

Syns. *Poa cilianensis* All., Fl. Pedem. 2:246, t.91, f2 (1785).
Eragrostis major Host., Gram. Austr. 4:14, t.24 (1809).
E. megastachya (Koeler) Link, Hort. Berol. 1:187 (1827).

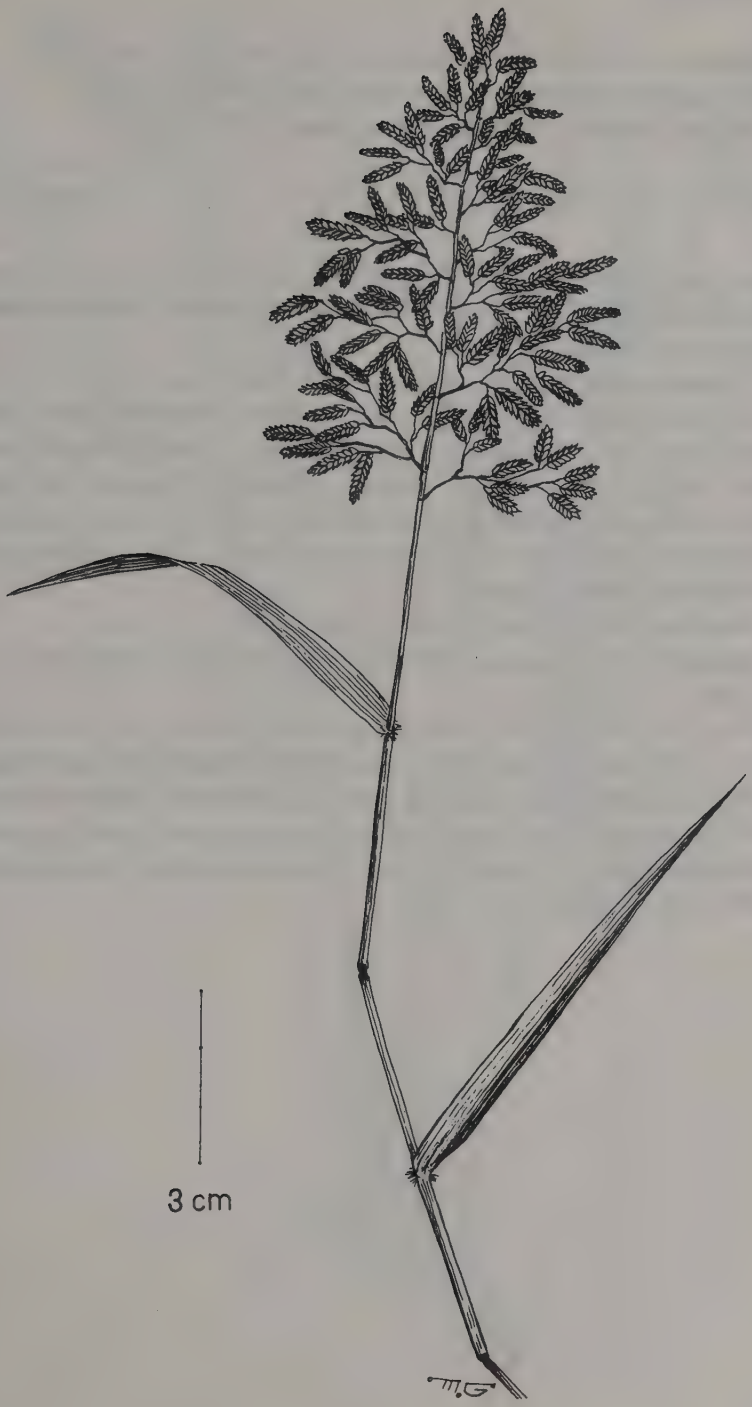
Stink grass

Eragrostis from Greek *Eros* the Greek god of love, and *agrostis,* Greek name for a grass, thus meaning love-grass, an allusion to the graceful swaying aspect of the inflorescence.

Annual grass, 20–60 cm, glabrous; culms tufted, erect or ascending, branched at the base; with a ring of glands below the nodes; leaf blades linear-lanceolate, tapering to a fine point, glandular along the midrib and the margins; ligule a fringe of short hairs; inflorescence a dense panicle of crowded subsessile, many-flowered spikelets.

Fields, gardens, orchards.

Mediterranean, western and central Europe, tropical Africa, Asia; introduced into many subtropical and temperate regions of the world.


3 cm

Imperata cylindrica (L.) Raeuschel, Nom. Bot., ed.3, 10 (1797).
Syns. *Lagurus cylindricus* L., Syst. Nat., ed.10, 2:878 (1759).
Imperata arundinacea Cirillo, Pl. Rar. Neap. 2:27, t.11 (1792).

حَلْفا ، ديل القُط *ḥalfa, dēl al-quṭṭ* Cogon grass

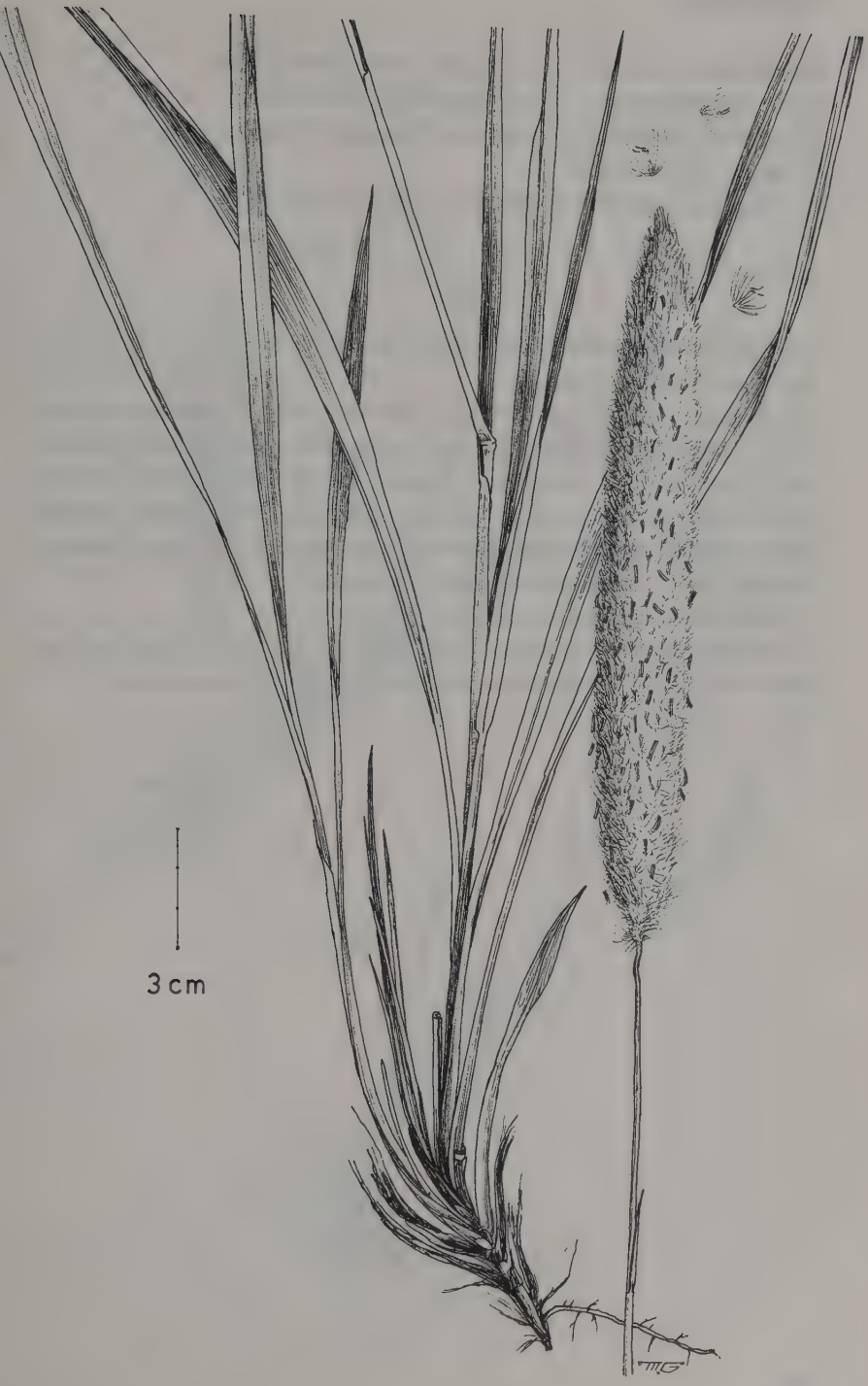
Imperata named in honor of Ferrante Imperate, Italian pharmacist and naturalist (1550–1625); *cylindrica* = cylindrical, probably allusion to the shape of the inflorescence.

Perennial herb, to 1.2 m; rhizome long, thick, rigid, scaly; culms glabrous; radical leaves crowded, long; cauline leaves few, short; leaf blades erect, stiff, tapering into a sharp point; ligule short; inflorescence spike-like, soft, silvery dense panicle; spikelets 1-flowered, 4–5 mm long, awnless, surrounded by a tuft of silky hairs, 12–15 mm; glumes long-pilose, denticulate at the tip; palea and lemma hyaline, glabrous; stigmas long, plumose, purple.

Roadsides, waste ground, orchards, canal banks.

Mediterranean, western and southern Europe, Sahara, western and central Asia.

The plant was used for making ropes, baskets, and mats in ancient Egypt (Täckholm and Drar 1941). According to Guest in Bor and Guest (1968), succulent young shoots are relished by livestock. The lower parts of the plant are used for making brushes. The entire grass is used together with other plants, e.g., reeds, for making screens to protect winter vegetables from the effect of the wind.


3 cm

Leptochloa fusca (L.) Kunth, Rév. Gram. 1:91 (1829).
Syns. *Festuca fusca* L., Syst. Nat., ed.10, 2:876 (1759).
Diplachne fusca (L.) P. Beauv. ex Roemer & Schultes, Syst. Veg., ed.15, 2:615 (1817).
Bromus polystachios Forssk., Fl. Aegypt.–Arab. 23 (1775).

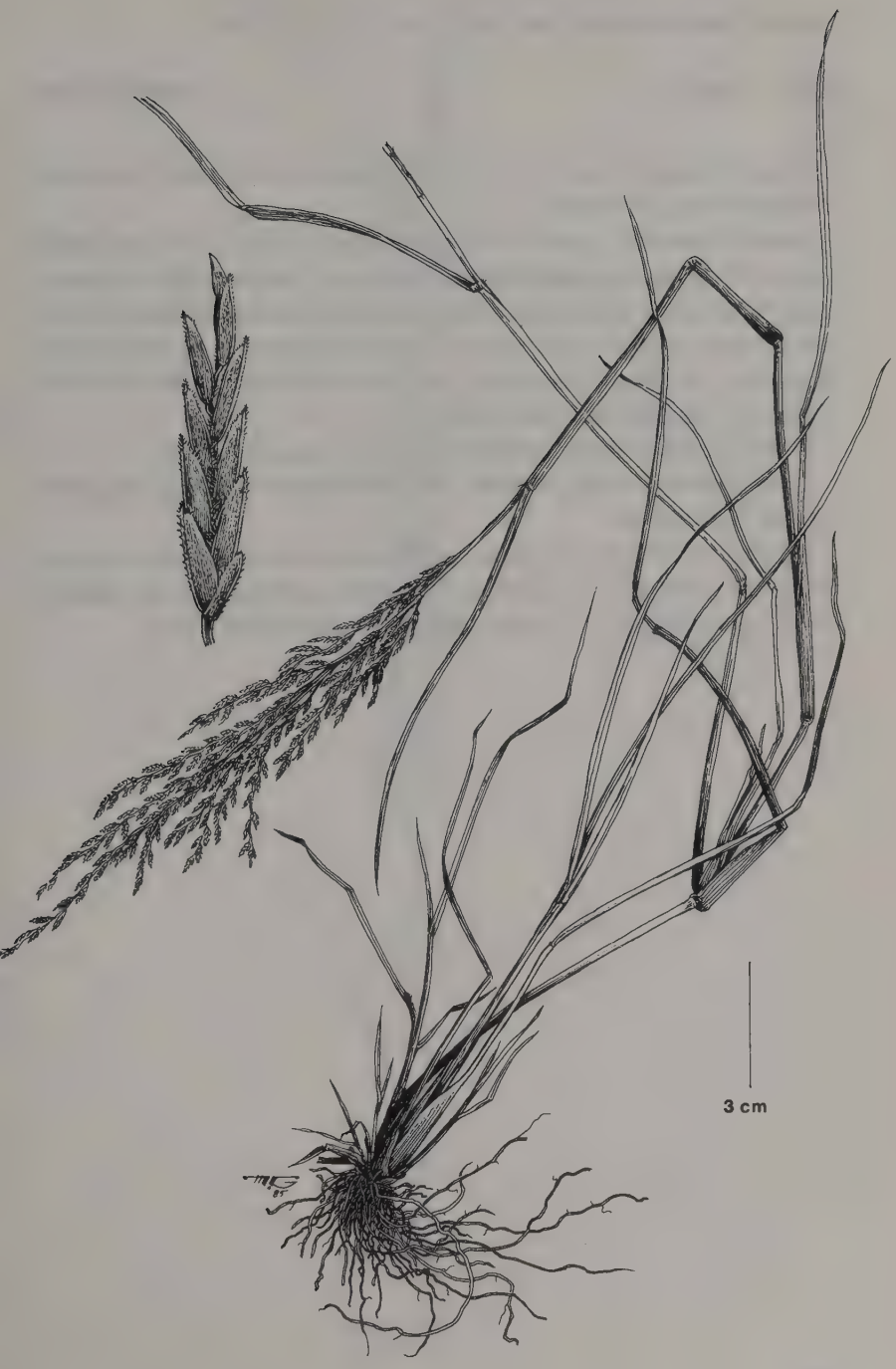
سَيفون *sayfūn*

Diplachne from Greek *diplos* = double, and *achne* = scale, probably allusion to the bidentate lemma.

Perennial grass, 50–80(–150) cm, glabrous; culms branching and rooting at the base; leaf blades to 30 cm; leaf sheaths smooth, bluntly keeled; ligule hyaline, with acute apex; panicle 20–30 cm, spikelets grayish green, distant from each other, narrowly-oblong, 5–10-flowered; glumes scabrid on keel; lower glume about half the length of the upper; lemmas bidentate, with a short mucro and ciliate margins.

Canal banks, ditches, rice fields.

Southeastern Mediterranean, tropical Africa and Asia; introduced but not widely distributed in southwestern Europe and South America.


3 cm

Lolium multiflorum Lam., Fl. Franç. 3:621 (1778).

صَامَّة *ṣāmma* Italian rye grass

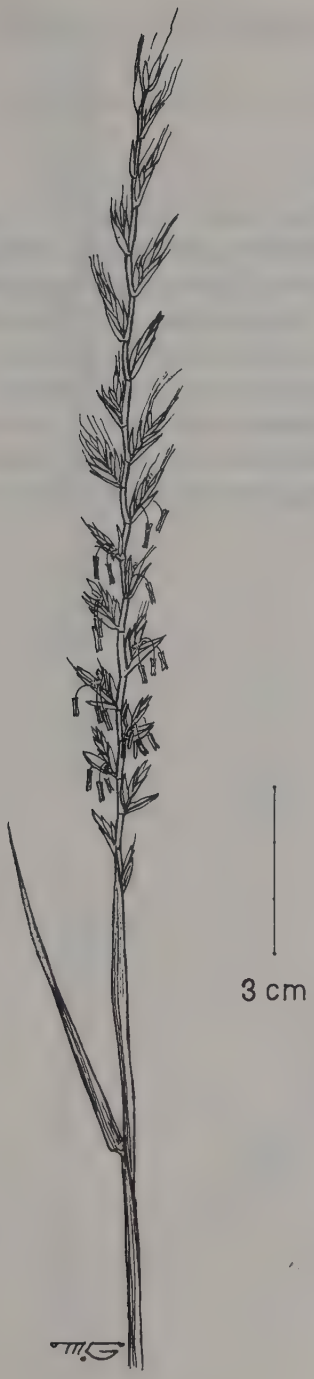
Lolium, a classical name given by a Roman poet to a similar grass; *multiflorum* = many-flowered.

Annual, biennial, or short-lived perennial, 30–80(–120) cm; culms rough toward the top, otherwise smooth; leaf blades to 20 cm, linear-acuminate, tapering to a sharp point, glabrous beneath, scabrous above; inflorescence a long spike, to 35 cm or more; spikelets awned, 10–20-flowered. A multiform species of which several varieties are known in Egypt (cf. Täckholm and Drar 1941).

Fields, gardens, lawns, orchards, roadsides, irrigation canals.

Mediterranean, Europe, western Asia; introduced into many temperate regions of the world.

This is a valuable fodder grass, much cultivated in temperate countries for pasture and hay. It is highly palatable and nutritious, grows rapidly, and gives a high yield of fodder (Guest in Bor and Guest 1968).


3 cm

Lolium perenne L., Sp. Pl., ed.1, 83 (1753).

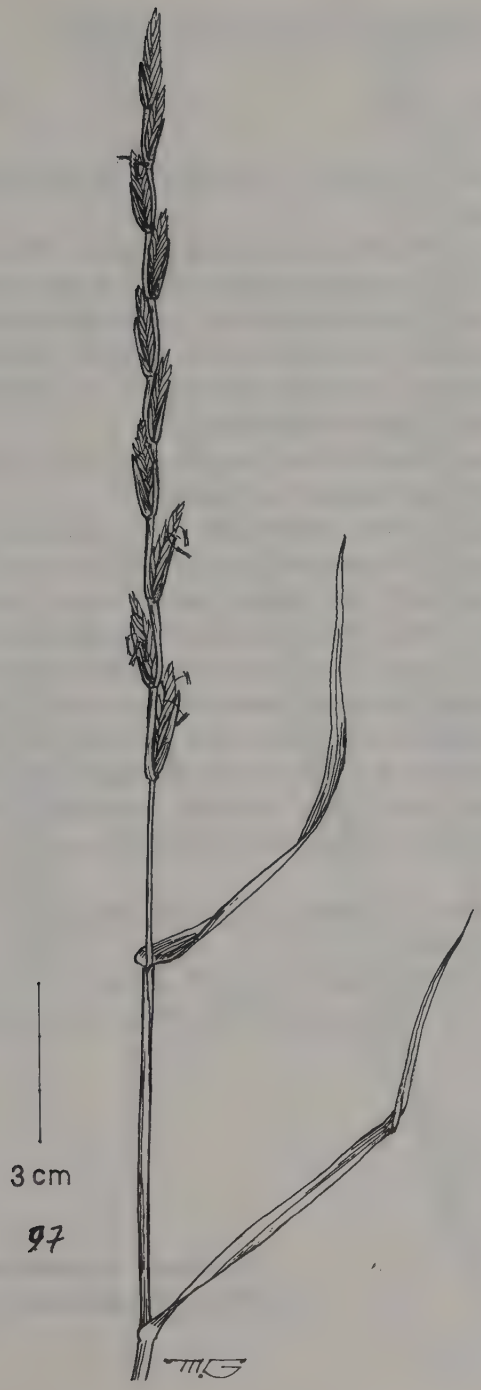
جازون ، حَشيش الفَرَس *gāzūn, ḥashīsh al-faras* Perennial rye grass

Perenne = perennial.

Perennial grass, often annual or biennial in Egypt, 30–80 cm; culms densely tufted, unbranched, densely leafy at the base; leaf blades flat, folded when young, shiny beneath, glabrous; inflorescence erect spike, to 30 cm; spikelets to 2 cm, awnless, 5–10-flowered. A few varieties are known from Egypt (cf. Täckholm and Drar 1941).

Fields, gardens, orchards, canal banks, roadsides.

This species is frequently cultivated as a lawn grass in Egypt. The plant contains several alkaloids, mainly perlolidine and perloline. Perloline is sometimes suggested as a treatment for rheumatism.



97

Lolium temulentum L., Sp. Pl., ed.1, 83 (1753).

زَوَان *zawān* Bearded rye grass

Temulentum = intoxicated, an allusion to the poisoning effect of its grains on cattle.

Annual grass, 40–80(–120) cm; culms tufted, robust and stiff; leaf blades to 25 cm, acuminate; inflorescence a rigid spike, to 40 cm; spikelets 5–10-flowered; glumes to 3 cm, as long as or exceeding the spikelets; lemma of lower flower very turgid at maturity, awned in f. **macrochaeton** (A. Br.) Junge, and awnless in f. **leptochaeton** A. Br.

Winter weed, mainly in wheat fields.

Mediterranean, Europe, Asia, eastern and southern Africa; introduced into North and South America and Australia.

The grains are toxic to livestock and even fatal, a fact known since ancient Egyptian and Graeco–Roman periods. However, young plants, alone or mixed with other forage plants, are used as fodder. In folk medicine, a decoction of the entire plant is prescribed for hemorrhage and incontinence of urine. Mature grains are used for rheumatism, arthritis, nausea, nosebleeds, intestinal cramps, and trembling limbs.

This species is known in two forms, one with long-awned lemmas: forma **temulentum**; and the other with awnless or short-awned lemmas: forma **arvense** (With.) Junge. According to Meikle (1985), a complete range from awnless to long-awned spikelets is known.

f. **macrochaeton** (A. Braun) Junge, Jahrb. Hamb. Wiss. Anst., Bieh. 3, 30:314 (1913).

f. **leptochaeton** A. Braun, Flora 7:252 (1834).

f. **arvense** (With.) Junge, Jahrb. Hamb. Wiss. Anst., Bieh, 3, 30:314 (1914).

a. **Lolium temulentum f. arvense**
b. **Lolium temulentum f. temulentum**

a
b
3 cm

Panicum coloratum L., Mant. Pl. 1:30 (1767).

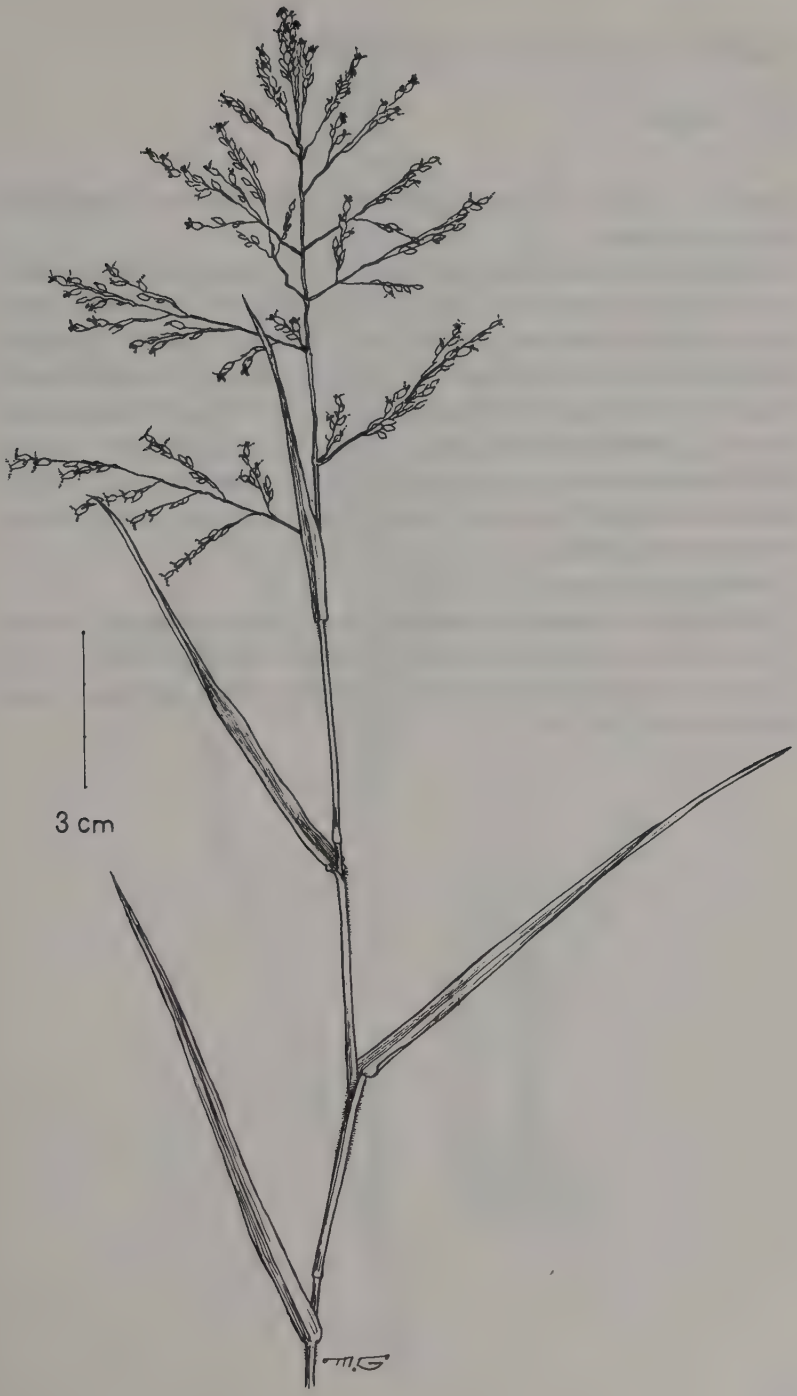
قُصَّيبة *quṣṣēba*

Panicum, a classical Latin name for millet; *coloratum* = colored, allusion to its purple glumes and orange-colored anthers.

Perennial grass, 50–80(–120) cm, rhizomes absent, roots fibrous; culms tufted, erect or ascending; leaf sheaths hirsute, ligule a ciliate rim; lamina lanceolate-linear, to 30 cm; inflorescence an open pyramidal panicle, 10–25 cm; spikelets purple, glumes unequal; anthers orange-colored.

Fields, gardens, lawns, hedges, canal banks.

Egypt, tropical and subtropical Africa.


3 cm

Panicum repens L., Sp. Pl., ed.2, 87 (1763).

زُمّار *zummār*

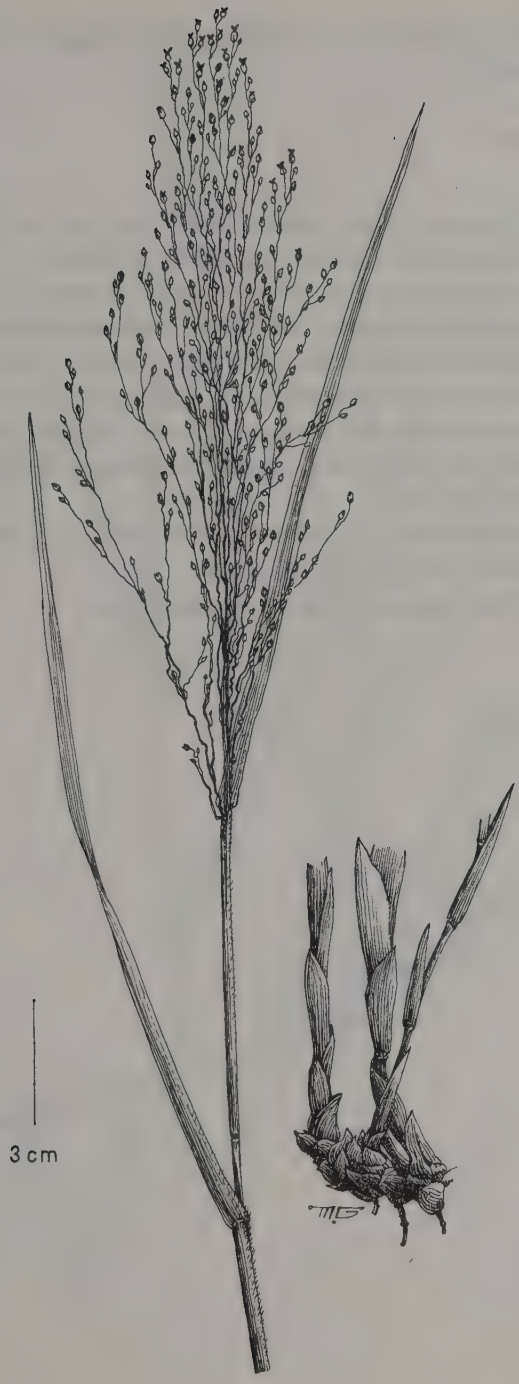
Repens = creeping and rooting, allusion to its creeping rhizomes with roots at the nodes.

Perennial grass, to 80 cm, with long creeping, widely spreading thick, scaly rhizomes; culms erect, rigid, many-noded; leaves distichous at the lower part of the culm; lamina linear, rigid, spreading, shortly tapering to a sharp point, leaf sheaths ciliate along the margins; ligule a membranous ciliate rim; inflorescence an open panicle, to 20 cm, with ascending branches; spikelets elliptic-acute, 2–2.5 mm; glumes dissimilar. The plant is variable in size according to the habitat where it grows; in moist habitats it is tall and produces a many-flowered panicle, short and few-flowered in dry habitats.

Fields, ditches, gardens, canal banks.

Mediterranean, western and southern Europe, warm regions of Asia and Africa, southern United States; probably native of the Old World.

This is a good forage plant and a useful binder for canal banks (Täckholm and Drar 1941).


3 cm

Paspalidium geminatum (Forsskål) Stapf in Prain, Fl. Trop. Afr. 9:583 (1920).

نسيلة *nisēla*

Paspalidium a name derived from *Paspalum*, see next species; *geminatum* = in pairs, allusion to the 2-rowed spike-like racemes.

Perennial, pale green grass, with creeping or floating stolons, rooting at nodes in moist habitas; short, tufted, not rooting at nodes in dry habitats; leaves glabrous, sheath smooth, ligule a finely ciliate rim; lamina broad, linear, acuminate; inflorescence slender, erect, to 30 cm, of numerous appressed spike-like racemes; racemes sessile, 2-rowed, lower racemes longer than upper ones; spikelets numerous, slightly imbricate, ovate, glabrous, smooth.

Irrigation canals, ditches, Nile banks, often floating on shallow water, in moist ground close to springs and wells.

Tropical and subtropical Africa, Asia, and America.

3 cm

Paspalum paspalodes (Michx.) Scribn., Mem. Bot. Club Mem. 5:29 (1894).

Syns. *Digitaria paspalodes* Michx., Fl. Bor.–Amer., 1:46 (1803).
Paspalum distichum auct. non L. (1753).

مُدّيد *muddēd* Knotgrass

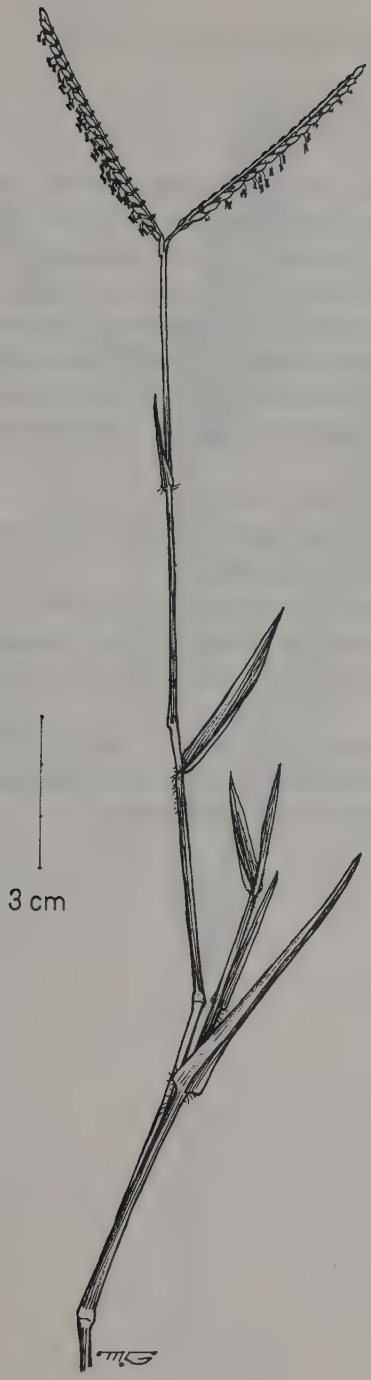
Paspalum from *paspalos*, the Greek word for millet; *paspalodes* = resembling *Paspalum* in aspect. The combination of these two rather similar names resulted from a nomenclatural change: the plant was originally described as *Digitaria paspalodes*, later related to the genus *Paspalum* to become **Paspalum paspalodes**, which indeed means *Paspalum* that resembles *paspalum*! It may be mentioned here that as long as the scientific or Latin name is constructed in accordance with the botanical rules of nomenclature, we are unable to bring any further changes to its construction, even if the result is as such.

Perennial herb, rhizome and stolons widely spreading; rooting at the basal nodes; leaf blade glabrous, flat, linear, attenuated to a pointed tip; inflorescence a pair of spikes, each consisting of a flattened rachis, with two rows of shortly pedicelled closely packed spikelets on its lower surface; spikelets oblong-elliptic.

Rice fields, ditches, moist ground, canal banks, shallow water.

Western and southern Europe, eastern Mediterranean, eastern Asia, America; originally native of America, naturalized in the Old World.

The grass provides good pasturage (Guest in Bor and Guest 1968).


3 cm

Phalaris minor Retz., Obs. Bot. 3:8 (1783).

شَعير الفار *sha'ir al-fār* Lesser canary grass

Phalaris is an ancient Greek name probably from *phalaros* = shining, referring to the polished grains of some species, as canary grass **Phalaris canariensis**, grown for bird feed; *minor* = small.

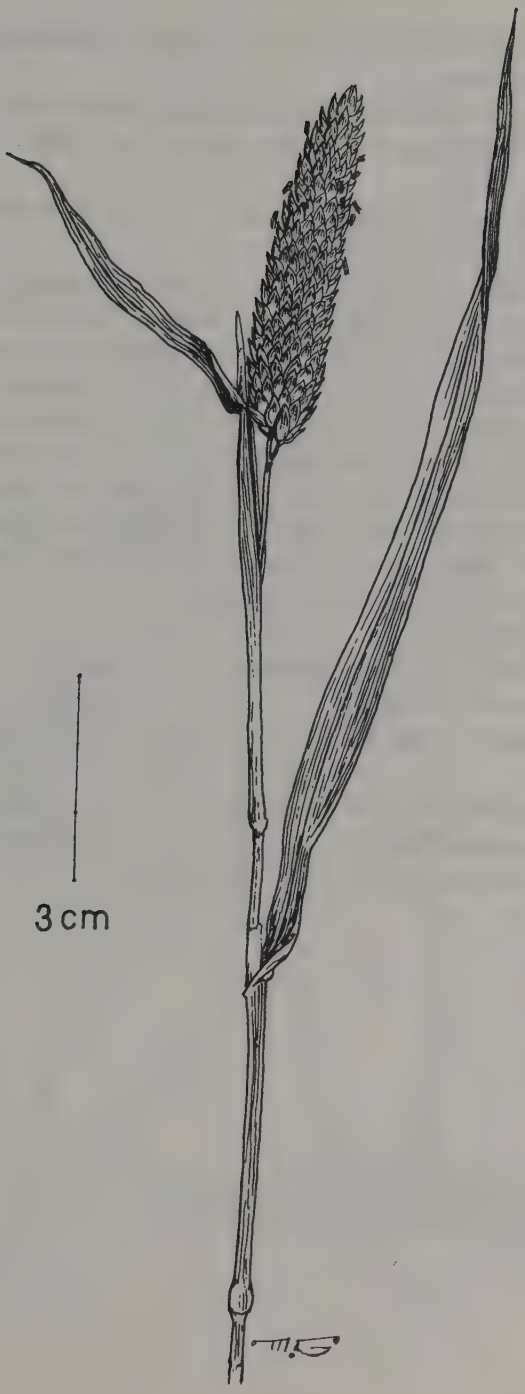
Annual grass, 20–80 cm, glabrous; culms tufted, leaf blades to 20 cm, flat, broadly-linear, tapering to an acuminate apex; inflorescence a dense oblong to oblong-ovate cylindrical panicle; all spikelets fertile, about 5 mm long; glumes compressed, equal, as long as the spikelet, 3-nerved, winged, wing denticulate; sterile lemma 1 mm long, fertile lemma 3 mm long.

Fields, gardens, orchards, roadsides.

Mediterranean, Europe, Asia; introduced into tropical and southern Africa, tropical America, and Australia.

The grains are often used as bird feed. According to Guest (in Bor and Guest 1968), the plant is a useful forage grass, which is grazed by sheep, cattle, and other livestock, but which should be avoided by young animals.

Phalaris paradoxa L., Sp. Pl., ed.2, 1665 (1763) is another annual weedy species which differs from the above by having both fertile and sterile spikelets within the same inflorescence.


3 cm

Phragmites australis (Cav.) Trin. ex Steud., Nomenclator Bot., ed.2, 2:324 (1841).

Syns. *Arundo australis* Cav., Anal. Hist. Nat. 1:100 (1799).
Phragmites communis Trin., Fund. Agrost., 134 (1820).

حجنة ، غاب ، بوص *ḥagna, ghāb, būṣ* Common reed, Ditch reed

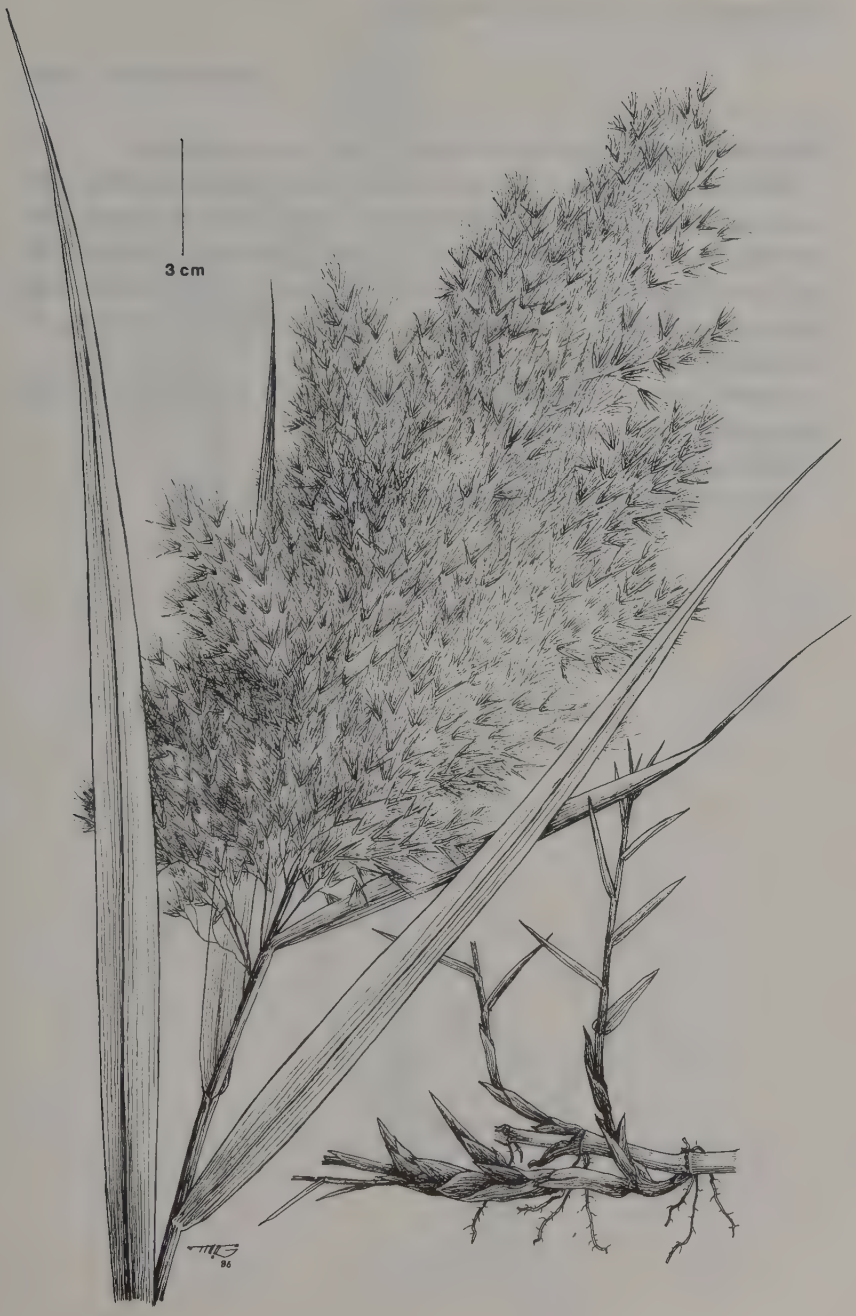
Phragmites from Greek *phragma* = fence or screen, as these large grasses form a hedgelike growth along ditches; *australis* = southern.

Perennial reedlike grass, to 2.5 m, rhizomes long, spreading; culms erect, stout, smooth, glabrous; leaf sheaths firmly clasping, overlapping; ligule formed of a ring of hairs; leaf blades linear-acuminate, stiff, scabrid on the margins, old leaf-blades deciduous from the sheaths; inflorescence a dense, erect, plumose panicle; spikelets 2–6-flowered, short-pedicellate; glumes persistent, unequal; lower glume 3-nerved, about half the length of the upper; upper glume 5-nerved; lemma of the lower sterile floret about twice the length of the upper glume, not hairy; lemma of upper fertile florets with long hairs.

Lakes, springs, ditches, irrigation canals, drains, Nile banks, wet ground, tolerant of saline soils.

Widespread in temperate regions of the world, with extensions into the tropics.

The plant is widely used for thatching and making baskets, sleeping mats, etc., especially in rural parts of the country. The rhizomes are used in popular medicine for their diuretic properties.


3 cm

Poa annua L., Sp. Pl., ed.1, 68 (1753).

Annual meadow grass

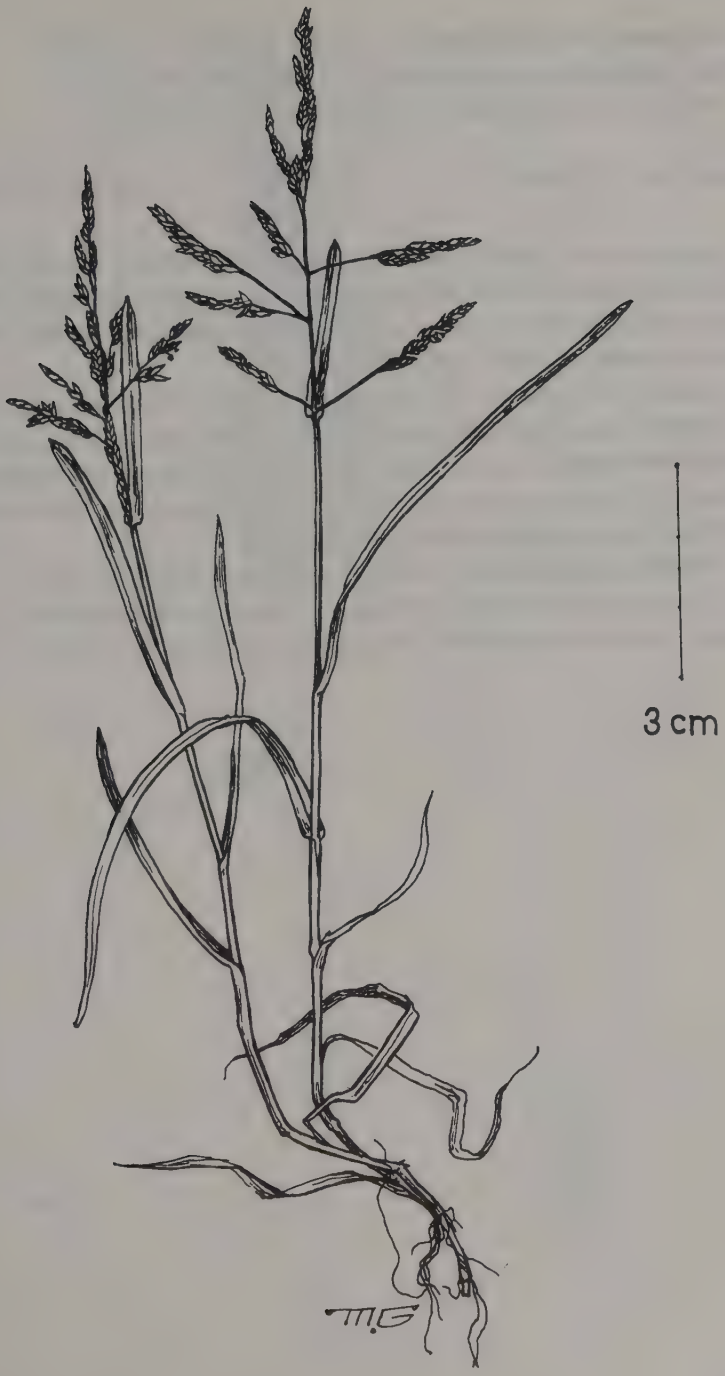
Poa = Greek name for a grass used as a fodder; *annua* = annual.

Annual or perennant, bright green grass, 10–25 cm; culms erect, flattened, geniculate or even prostrate, glabrous and smooth; leaf blades narrowly-linear, to 12 cm; inflorescence a pyramidal lax panicle with spreading branches; spikelets 3–5-flowered; glumes unequal, with membranous margins; lower glume 1-nerved, upper 3-nerved; lemma 3 mm long, 5-nerved; palea 2-nerved.

Winter weed in fields, gardens, lawns, moist ground near wells, springs, and irrigation canals.

Mediterranean, Europe, Asia.

This is a good lawn grass, often grazed by livestock.


3 cm

Polypogon monspeliensis (L.) Desf., Fl. Atl. 1:67 (1798).
Syns. *Alopecurus monspeliensis* L., Sp. Pl., ed.1, 61 (1753).
Phalaris cristata Forsskål, Fl. Aegypt.–Arab. 17 (1775).

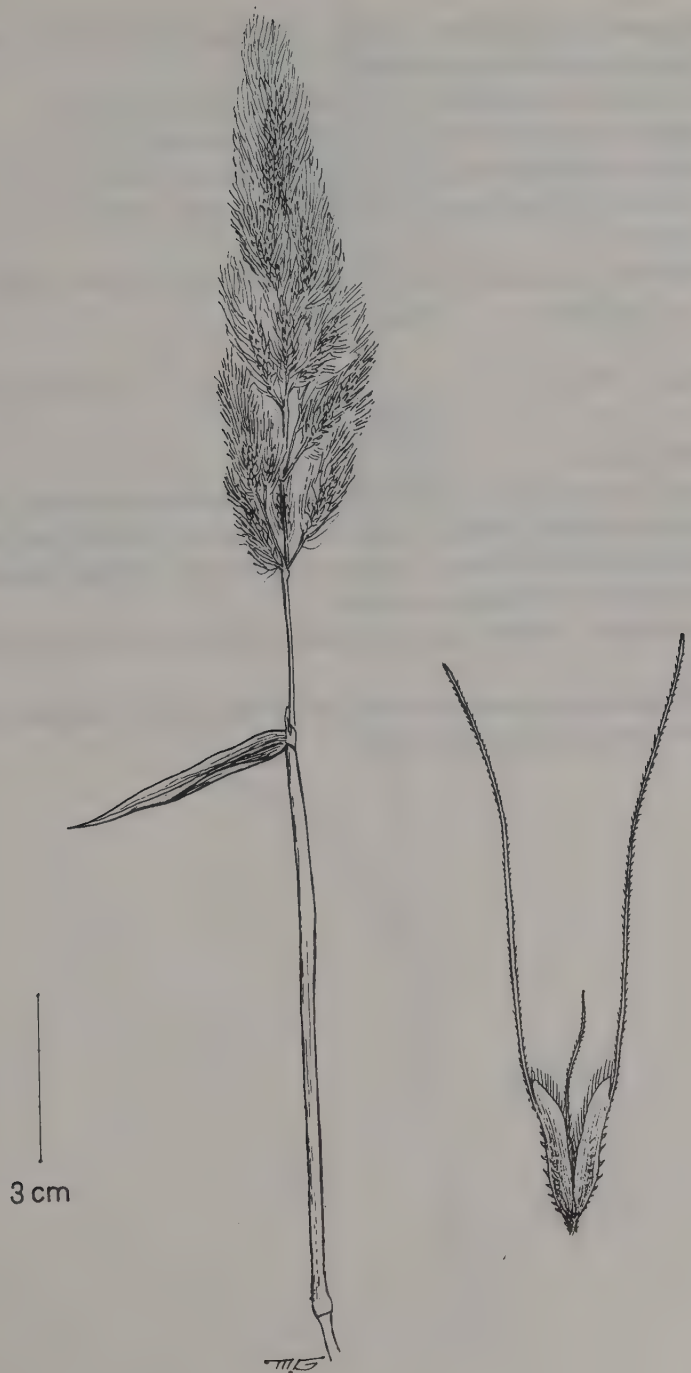
ديل القُط *dēl al-quṭṭ* Annual beard-grass

Polypogon from Greek *polu* = many, and *pogon* = beard, allusion to the densely crowded awns in the inflorescence; *monspeliensis* named after Montpellier, a town in southern France famous since pre-Linnaean times for its botanical activities and university.

Annual grass, 10–40(–60) cm, glabrous; culms loosely tufted, erect or geniculate ascending; leaf blades flat, dark green, attenuated to an acute point; inflorescence a dense, soft, panicle; spikelets dense, subsessile, deciduous, 2.5 mm; glumes equal, 1-nerved, margins minutely ciliate; awn 6–8 mm long; lemma 5-nerved; palea 2-nerved.

Irrigation canals, ditches, moist ground around springs and wells.

Mediterranean, western and southern Europe, Asia, tropical and subtropical Africa; introduced into many warm regions of the world.


3 cm

Polypogon viridis (Gouan) Breistr., Bull. Soc. Bot. Fr., 89, Session Extraordinaire 110:56–58 (1963).

Syns. *Agrostis viridis* Gouan, Hort. Reg. Monsp. 546 (1762).
Phalaris semiverticillata Forsskål, Fl. Aegypt.-Arab., 17 (1775).
Agrostis verticillata Vill., Prosp. Plant Dauph., 16 (1779).
A. semiverticillata (Forsskål) Christ., Dansk. Bot. Archiv. 4:12 (1922).
Polypogon semiverticillatus (Forsskål) Hyl., Uppsala Univ. Arsbok, no.7:74 (1945).

دِيل الفار *dēl al-fār* Water bent grass

Viridis = green.

Perennial tufted grass to 80 cm, glabrous, smooth; culms often forming creeping stolons, rooting at nodes; leaf blades to 10 cm, ligule scarious; inflorescence green or purplish panicle, with whorled branches; spikelets small, one-flowered, awnless.

Canal banks, ditches, moist ground in fields, around springs and wells.

Mediterranean, eastern and central Asia, eastern Africa; introduced into many temperate regions of the world.

3 cm

Setaria pumila (Poir.) Roemer & Schult., Syst. Veg., 2:891 (1817).
Syns. *Panicum pumilum* Poir. in Lam., Encycl. Méth., Suppl., 4:273 (1816).
Setaria glauca non (L.) P. Beauv., Essai Agrost., 51, 178 (1812).
S. lutescens (Weigel) Hubb., Rhodora 18:232 (1916).

شَعر الفار *shaʿr al-fār* Yellow bristle grass

Setaria from Greek *seta* = bristle; *glauca* = blue green or sea green, resembling the color of cabbage leaves.

Annual grass, 20–60(–80) cm; culms tufted, erect or geniculate ascending, compressed, leafless in the upper part; leaf blades linear, to 25 cm, soft, tapering into a pointed end; inflorescence erect, cylindrical, spike-like panicle; spikelets about 3 mm long (larger than in the 2 following species), short-stalked, wrinkled, subtended by numerous antrorse scabrid yellow bristles.

Fields, gardens, orchards, roadsides, waste ground, irrigation canals.

Northern Africa, Europe, Asia; introduced into many warm and temperate regions of the world.

3 cm

Setaria verticillata (L.) P. Beauv., Essai Agrost., 51, 178 (1812).
Syn. *Panicum verticillatum* L., Sp. Pl., ed.2, 82 (1762).

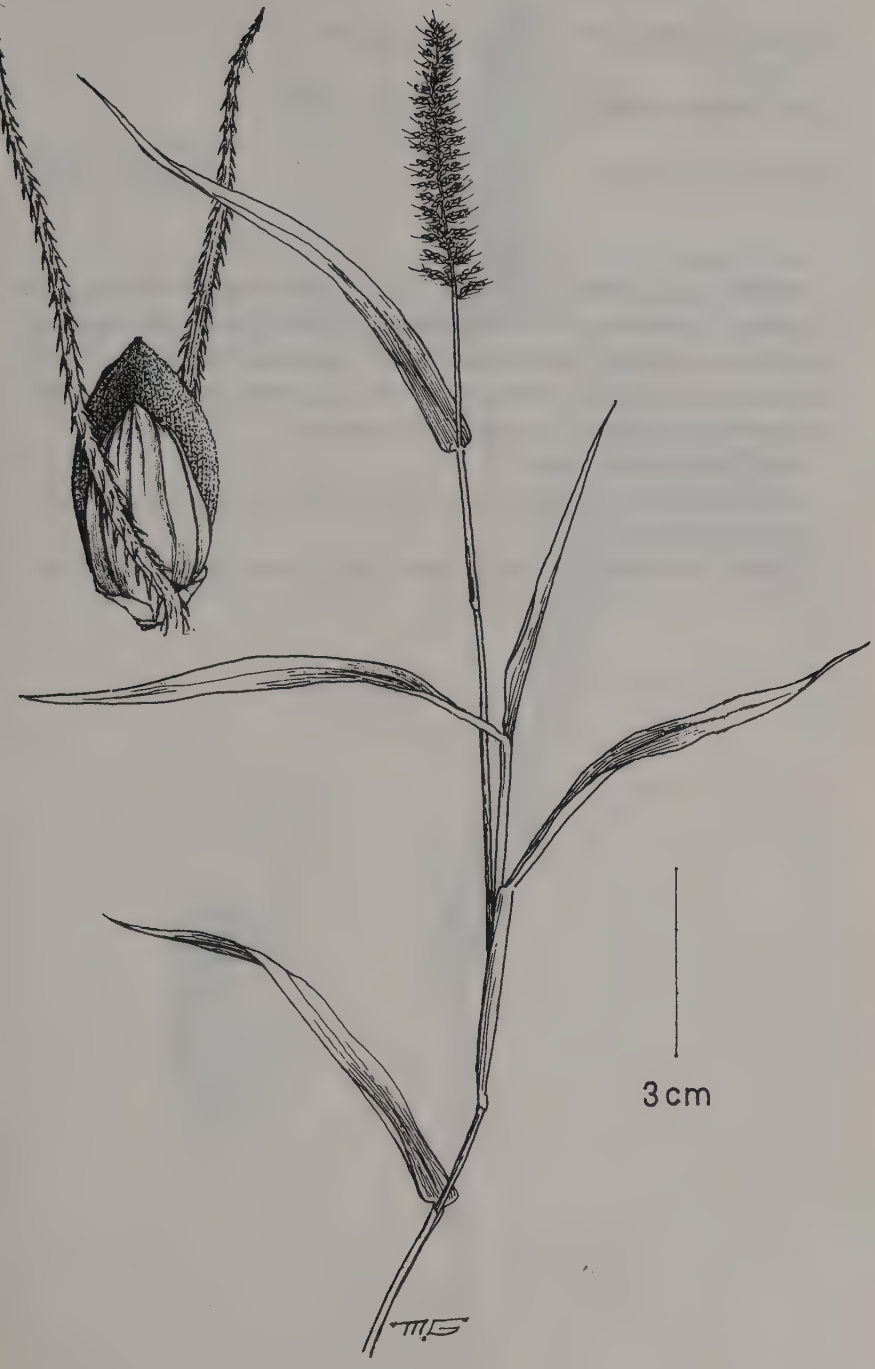
قَمح الفار *qamḥ al-fār* Rough bristle grass

Verticillata = probably referring to the shape of the mature inflorescence.

Annual grass, 20–60(–100) cm, glabrous; culms densely tufted, erect or geniculate ascending; leaves flat, rough, narrowly-linear, to 30 cm; inflorescence spike-like panicle, 5–12 cm, cylindrical and dense when young, becoming irregularly lobed with short branches and retrorse scabrous bristles at maturity; spikelets 2mm long, broadly elliptic, subtended by long, retrorse-scabrid bristles; glumes very unequal; lower glume 1–3-nerved, upper 5–7-nerved.

Fields, gardens, orchards, moist shaded ground, ditches, irrigation canals.

Northern Africa, Europe, Asia; introduced elsewhere into warm and temperate regions of the world.


3 cm

Setaria viridis (L.) P. Beauv., Essai Agrost., 51, 178, t.13, f.3 (1812).

Syn. *Panicum viride* L., Syst. Nat., ed.10, 2:870 (1759).

ديل الفار *dēl al-fār* Green bristle grass

Viridis = green.

Annual grass, 20–60 cm; culms erect or geniculate ascending; leaf blades soft, lanceolate, with acuminate apex; inflorescence erect, green or purplish, cylindrical, spike-like panicle; spikelets densely imbricate, about 2 mm, ellipsoid, subtended by one to several antrorse scabrous bristles which are much longer than the spikelets.

Fields, gardens, orchards.

North Africaern, Europe, Asia; introduced into North and South America and Australia.

This is good fodder for cattle when young (Guest in Bor and Guest 1968).

3 cm

Sorghum virgatum Stapf in Prain, Fl. Trop. Afr. 9:111 (1917).

حَشيش الفَرَس *ḥashīsh al-faras* Tunis grass

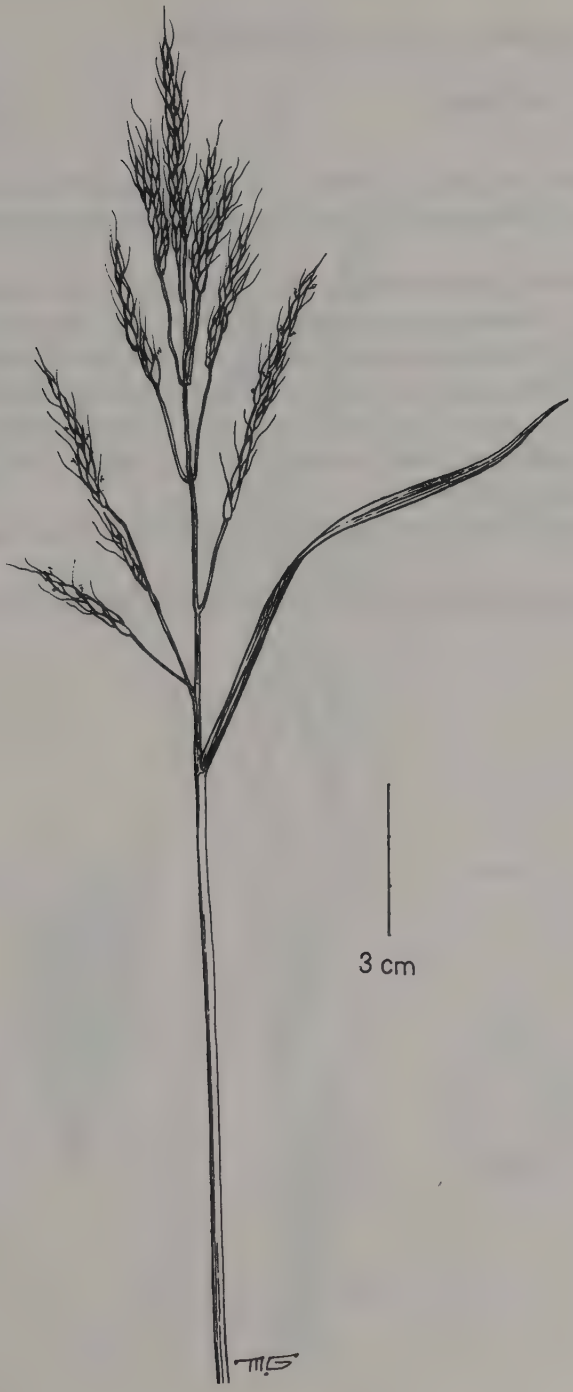
Sorghum from *sorgho* the Italian word for the plant; *virgatum* = with drooping branches (willowlike).

Annual or short-lived non-rhizomatous perennial grass, 30–80 cm; culms slender; leaf sheaths densely hairy at the nodes, ligule thin; lamina green, to 40 cm, often tinged with red, narrowly linear; inflorescence to 60 cm, often drooping, spikelets sessile, yellowish green, often purplish, finely awned.

Fields, Nile and canal banks.

Tropical and subtropical Africa; introduced elsewhere into warmer regions of the world.

This is used as a forage plant.


3 cm

Juncus bufonius L., Sp. Pl., ed.1, 328 (1753).

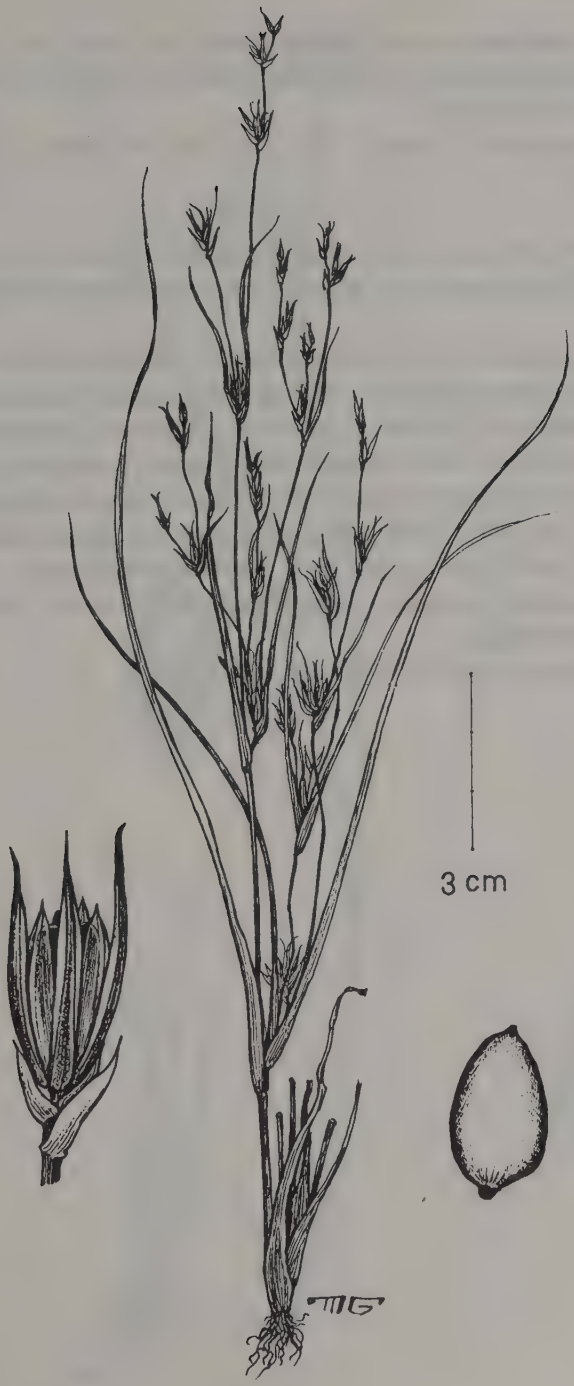
شَعر القرد *shaᶜr al-qird* Toad rush

Juncus from Latin *jungo* = to bind or tie, culms of some species being used as ropes; *bufonius* = of the toad color (hence the English name: toad rush).

Annual tufted, non-rhizomatous herb; culms erect or ascending, to 40 cm; leaves 1–5 below the inflorescence, to 10 cm, flat, often with convolute margins, inflorescence a terminal lax cyme, reaching to half of the culm, lowest bract equal to or exceeding the inflorescence; flowers solitary, rarely in clusters, each flower subtended by a bract; tepals 6, unequal, with scarious margins; stamens 6, rarely 3; capsule about 4 mm, seeds obliquely ovate to elliptic.

Nile and canal banks, lake margins, moist ground around wells and springs.

Almost cosmopolitan, absent from extremely hot and polar regions.


3 cm

Juncus fontanesii Gay ex Laharpe, Mém. Soc. Hist. Nat., Paris, 3:130 (1827) subsp. **pyramidatus** (Laharpe) Snogerup in Rech., Fl. Iran., 75:25 (1971).

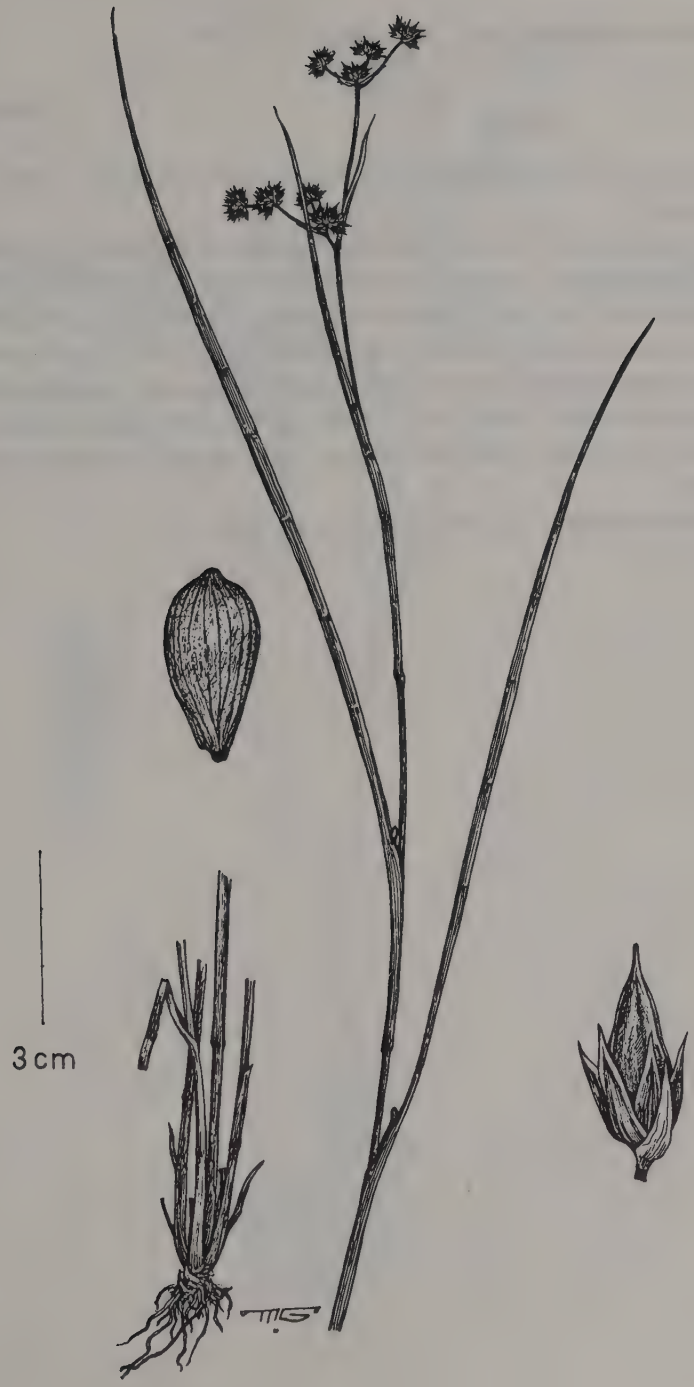
Syn. *J. Pyramidatus* Laharpe, Mém. Soc. Hist. Nat., Paris, 3:128 (1827).

Fontanesii probably named after the Italian botanist Felice Fontana (1731–1805); *pyramidatus* = pyramid-shaped, allusion to the shape of the capsule.

Perennial herb,15–40 cm, rhizome weakly developed or absent; culms tufted, erect, developing from the nodes of creeping suckers above the ground; leaves 3–5, cauline, to 25 cm long, auriculate; inflorescence terminal, lowest bract shorter than the inflorescence, formed of 4–12 hemispherical clusters, each cluster 5–10-flowered; flowers subsessile, subtended by one bract, about 3 mm, with scarious margins; capsule pyramidal, 4–5 mm, tapering at the apex, glossy, reddish brown.

Moist ground, marshes, aroung springs and wells, canal banks, ditches, lake borders.

Mediterranean, eastern Asia to Iraq.


3 cm

Juncus hybridus Brot., Fl. Lusit. 1:513 (1804).

Hybrid rush

Hybridus = of hybrid origin, bearing the characteristics of both parent species.

Annual herb, 10–30 cm, non-rhizomatous; culms densely tufted, erect; leaves basal, to 15 cm; infloresecence a terminal cyme, reaching to half or one-third of the culm; lowest bract equal to or exceeding the inflorescence; flowers in clusters of 2–8, rarely solitary, each flower subtended by a bract; tepals 6, unequal, herbaceous, with scarious margins; stamens 6; capsule about 3 mm, glossy, reddish brown; seeds barrel-shaped.

Nile and canal banks, lake margins, moist ground around springs and wells.

Mediterranean, western Europe, western Asia.

3 cm

II. Ferns

Adiantum capillus-veneris L., Sp. Pl., ed.1, 1096 (1753).

كُزبرة البير *kuzbarat al-bīr* Maidenhair, Venus's hair

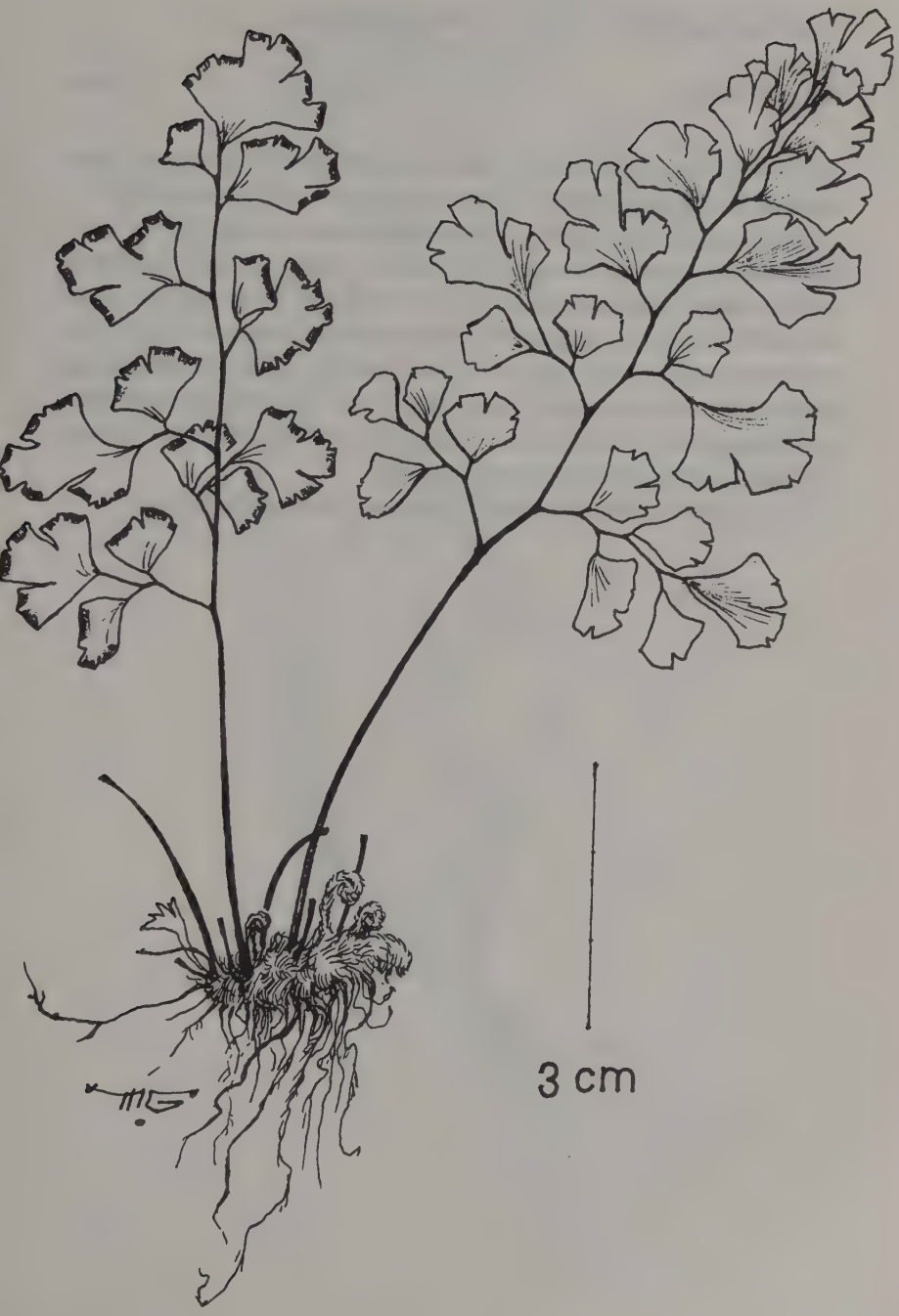
Adiantum from Greek *adiantos* = dry or unwetted, referring to the leaflets and petiole which repel water, even if plunged into water the fronds remain dry; *capillus-veneris*, from *capillus* = hair, and *veneris* = pertaining to Venus, or Venus hair.

Perennial herb, rhizome thick, creeping, with opaque scales; fronds (leaves) to 50 cm, 2–3-pinnate; petiole to 25 cm, black, shining; lamina bright green; pinnules variable in shape and size, on capillary stalks; sori in parallel linear groups, on the lower side of the pinnules.

Moist shaded habitats, wells, along streams.

Cosmopolitan.

The fronds are an expectorant and emollient. An infusion is used for colds, bronchitis, asthma, and other chest diseases.


3 cm

MARSILEACEAE

Marsilea aegyptiaca Willd., Sp. Pl. 5:540 (1810).

قُرَيطة *qurēṭa* Nardoo

Marsilea is named in honor of Count Luigi Ferdinando Marsigli, Italian botanist from Bologna (1656–1730); *aegyptiaca* = of Egyptian origin.

Perennial, glabrous, aquatic or terrestial herbaceous fern, with a creeping rhizome; fronds circinnate when young, with 4 opposite triangular leaflets, borne terminally on a long stipe (petiole), in dry habitats stipes and leaflets are much reduced in size; sporocarps in dense groups, clustered at the base of the stipe; the plant (usually terrestial forms) rarely produces sporocarps, aquatic forms (frequently seen in Egypt) reproduce vegetatively, this species seems to tolerate prolonged periods of drought.

Canals, ditches, rice fields, moist ground.

Egypt, Tunisia, eastern Africa, southwestern Africa, Madagascar.

3 cm

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Jacket illustration: ***Oxalis corniculata*** *by Magdy El-Gohary*

Printed in Egypt
ISBN 977 424 323 4

Also from
The American University in Cairo Press

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M. Nabil el-Hadidi
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ISBN 977 424 173 8

The American University in Cairo Press